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AND
SURGERY.

VOL. I.

JULY—OCTOBER, 1839.

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ADDRESS TO THE MEDICAL PROFESSION.

IN presenting a new Journal to the Medical Profession, the Publisher trusts that the undertaking will meet with their approval.

It is his intention to afford every facility for the publication and circulation of original matter, and of important Medical Intelligence, of which New-York possesses so large a share, as well as to introduce every thing of importance occurring in the Medical World abroad.

For this object he purposes to establish a regular correspondence with the principal seats of Medical Science in Europe, which shall place at his disposal all recent and interesting facts, as well as new and important works as they appear.

The Publisher takes the present opportunity to state, that the new Journal had its origin among the older members of the Medical Profession in New-York; that the plan proposed has been matured by much reflection, and will be pursued with energy and zeal. It was his intention to have published a list of Collaborators, but at the suggestion of the Editors, this plan has been changed; a list of this kind would, in fact, have embraced all the Medical talent of the city. The unanimity of feeling which pervades the profession on this subject, and the constant expression of the determination to support the enterprise, are a sufficient proof that a Journal devoted to the progress of Medical Science, has been much wanted in this city.

NEW-YORK. JULY 1, 1839.



CONTENTS

OF THE

NEW-YORK JOURNAL OF MEDICINE AND SURGERY.

No. I.—JULY, 1839.

	PAGE
ART. I. A summary View of the Progress of Medicine in America. By John Watson, M.D.	1
ART. II. Case of Bony Tumour, arising from the Pelvis. By J. Kearney Rodgers, M.D, Surgeon to the New-York Hospital, and to the New-York Eye Infirmary.	23
ART. III. Cases of Sensitive Tumours of the Female Urethra, with Remarks. By Alexander E. Hosack, M.D.	29
ART. IV. An Essay on Cancer of the Uterus. By John A. Swett, M.D. (Read before the New-York Medical and Surgical Society, Sept. 1, 1838.)	34
ART. V. Observations on Morbus Coxarius. By John G. Adams, M.D. (Read before the New-York Medical and Surgical Society, Jany. 27, 1838.)	57
ART. VI. A case of Abstraction of the Uterus, after Delivery. Reported by John H. Griscom, M.D.	74
ART. VII. Extirpation of a Part of a Rib for Neuralgia. By E. H. Dixon.	80

HOSPITAL REPORTS.

A Report of Cases of Remittent Fever, treated in the Medical Wards of the New-York Hospital, during the summer of 1836. (F. U. Johnston, M.D. Attending Physician.) By N. Shook, M.D; formerly Resident Physician.	83
A Report of Cases Illustrating the Treatment of Fractures, by the Immovable Apparatus. By John S. Heard, M.D., and James B. Gould, M.D; late House-Surgeons of the New-York Hospital.	109

Researches on the Tubercular Disease of the Bones. By A. Nélaton, M.D. Translated from the French. By Charles R. King, M.D.	116
---	-----

BIBLIOGRAPHIC NOTICES.		PAGE
The Elements of Materia Medica. By Jonathan Pereira, F.R.S. & L.S.		149
Flora Medica. By John Lindley, F.R.S.		151
Elements of Materia Medica and Therapeutics. By Anthony Todd Thompson, M.D. &c.		156
A Flora of North America. By John Torrey and Asa Gray.		157
Chemistry of Organic Bodies. By Thomas Thompson, M.D.		158
A Dictionary of Materia Medica and Practical Pharmacy. By W. T. Brande.		160
Essays on the most important Diseases of Women. By Robert Ferguson, M.D.		163
The Dublin Practice of Midwifery. By H. Maunsell, M.D.		168
Lectures on the Principles and Practice of Midwifery. By James Blundell, M.D.		171
Traité Pratique des Maladies Vénériennes. Par Ph. Ricord, M.D.		172
The Principles of Diagnosis, &c. By Marshall Hall, M.D.		187
The Surgeon's Vade-Mecum, &c. By Robert Druitt, M.R.C.S.		188
Prostitution in London, &c. By Michael Ryan, M.D.		190
A Popular Treatise on Medical Philosophy, &c. By Caleb Ticknor, M.D.		191
Outlines of the Institutes of Medicine, &c. By Joseph A. Gallup, M.D.		193
Boylston Prize Dissertations. By Usher Parsons, M.D.		193
The Elements of the Practice of Medicine, &c. By Wm. Reid, M.D.		195
Valedictory Address to the Students in Medicine. By John B. Beck, M.D.		195
Lectures on the Theory and Practice of Medicine. By John Eliotson, M.D.		197
A Treatise on the Diseases produced by Masturbation, &c. By L. Deslandes, M.D.		198
An Introductory Lecture. By Jonathan Knight, M.D.		198
Annual Address, &c. By Thomas Miner, M.D.		199

SCIENTIFIC INTELLIGENCE.

Proceedings of the New-York Medical and Surgical Society	201
Extracts from the Minutes of the Kappa Lambda Society	213
City Inspector's Report	226
Memoir of Dr. Physick. By J. Randolph, M.D.	236
Cases of Lithotrity. By Alban Gold-Smith, M.D.	238
Abstraction of the Uterus, Letter from Dr. Noyes	239
MISCELLANEOUS NOTICES.	241

CONTENTS

OF THE

NEW-YORK JOURNAL OF MEDICINE AND SURGERY.

NO. II. — OCTOBER, 1839.

	PAGE
ART. I. A Comparative View of the State of Medicine in the Years 1733 and 1833, an Introductory Lecture. By Joseph Mather Smith, M.D., Prof., &c.	245
ART. II. Practical Observations on Chorea Sancti Viti. By David M. Reese, A.M. M.D. Prof. &c.	267
ART. III. Practical Cases of Ovarian Disease. By G. S. Bedford, M.D. Prof. &c.	277
ART. IV. Observations on Delirium Tremens. (Read before the New-York Medical and Surgical Society.) By John L. Vandervoort, M.D.	294
ART. V. A Case of Dislocation of the Patella upon its Axis, with Comments. (Read before the New-York Medical and Surgical Society.) By John Watson, M.D.	302

HOSPITAL REPORTS.

Statistics of the Bloomingdale Asylum for the Insane. (Read before the New-York Medical and Surgical Society.) By James Macdonald, M.D.; late Resident Physician of the Bloomingdale Asylum, &c.	307
Report of Cases of Un-united Fracture, treated at the New-York Hospital. By John S. Heard, M.D; late House-Surgeon.	343
Case of Hydrophobia. Reported by Richard H. Coolidge, one of the Assistants of the Bellevue Hospital.	359
Case of Femoral Aneurism. Ligature of the External Iliac Artery. Cure. By James H. Dickson, M.D.	361
An Essay on the Indications for Tracheotomy, founded on the Absence of the Vesicular Murmur of Respiration. By J. B. Barth, Clinical Chief to the Faculty of Medicine, Paris, &c. Translated from the French, by John Punnett, M.D.	364

REVIEWS.

Maladies des Enfants. Affections de Poitrine. Pneumonie. Par MM. Rilliet and Barthez. (A Treatise on the Pneumonia of Children.) Paris.	
II. A Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. Laennec, M.D. Translated by John Forbes, M.D., &c. To which are added the Notes of Professor Andral. Translated and accompanied by Observations on Cerebral Auscultation. By John D. Fisher, M.D. &c.	
III. An Elementary Treatise on Auscultation and Percussion. By A. Racioborski, M.D. Translated by Minturn Post, M.D.	383
A Treatise on Club-Foot and Analogous Distortions, &c. By W. J. Little, M. D. London.	
II. A Lecture on Loxarthrus, or Club-Foot. By Thomas D. Mütter, M.D. Philadelphia.	400

CONTENTS.

BIBLIOGRAPHIC NOTICES.

	PAGE
Traité des Différmités du Système Osseux, &c. (A Treatise on the Deformities of the Osseous System, with an Atlas of 174 plates.) By F. Humbert and N. Jacquier, M.D.	413
On Granular Degeneration of the Kidneys, &c. By Robert Christison, M.D., F.R.S.E., &c.	415
A Treatise on the Diseases of Children. By C. M. Billard, M.D. Translated, with an Appendix. By James Stewart, M.D.	434
A Treatise on the Eye, &c. By Wm. Clay Wallace, Oculist,	439
Intermarriage, &c. By Alexander Walker.	440
A Winter in the West Indies and Florida. By an Invalid.	440
An Introduction to the Study of Chemical Philosophy, &c. By J. Frederick Daniell, F.R.S., &c.	441
II. Elements of Chemistry, Theoretical and Practical. By D. B. Reid, F.R.S., &c.	441
Total Abolition of Personal Restraint in the Treatment of the Insane. By Robert G. Hill.	444
A Guide to Mothers and Nurses in the Management of Young Children. By Caleb Ticknor, M.D.	446
Observations on the Typhoid Fever of New-England. By Enoch Hale, M.D.	447
Animal Mechanism and Physiology. By John H. Griscom, M.D.	447
Steggall's Manuals for Students.	448
A New Dictionary of Medical Science. By Robley Dunglison, M.D.	448

SCIENTIFIC INTELLIGENCE.

Proceedings of the New-York Medical and Surgical Society.	449
Operation for Spermatocoele.	458
Extirpation of the Womb by Ligature.	459
Treatment of Lateral Deviation of the Spine.	459
Operation for Artificial Anus.	460
Treatment of Vesico-Vaginal Fistula.	461
Wounds of the Head.	463
Lesion of the Trunk of the Ganglionic System of Nerves.	464
Successful Operation for Remedying a Deformity of the Leg.	464
Perforations of the Stomach from Poisoning and Disease.	466
Disorders of the Brain, connected with Diseased Kidneys.	470
Tubercles of the Brain.	471
Cases of Hydrophobia.	480
Anamolous Disposition of the Colon.	482
Fistulous Opening communicating with the Œsophagus.	484
Contributions to Intra Uterine Pathology.	484
New Mode of preparing the Tincture of Digitalis.	485
Effect of Bloodletting and Blisters to the Chest in the Pneumonia of Children.	486
Present Condition of Medicine in Spain.	487
Ivory Bougies.	489
New Mode of Cauterizing the Urethra.	489
MISCELLANEOUS NOTICES.	490

THE
NEW-YORK QUARTERLY JOURNAL
OF
MEDICINE AND SURGERY.

FOR JULY, 1839.

ART. 1. *A Summary View of the Progress of Medicine in America.* By JOHN WATSON, M.D.

THE occasion of presenting to the public a new medical periodical, may not, we trust, be deemed an improper one for offering some remarks on the progress of medical science in this country—for summing up the improvements that have already been effected here—and for fixing limits which may, perhaps, hereafter serve as landmarks between ourselves and our predecessors. There are many reasons which at the present moment invite us to this course. The youth who for the first time is called upon to separate from his friends and home, to depart to distant lands, or engage in scenes and occupations that are new to him; before taking to his journey, turns naturally to his old associates: though flushed with anticipation, he thinks upon the past, and feels, what he may never before have thought about, his weight of obligation to the guiding hands that have thus far led him onward. Such is our condition. Embarked in an enterprise for which we have made but little preparation, in which we acknowledge our deficiency, and to which we have been urged, not so much by our own inclination as by the solicitations of our friends, we feel, before entering upon other duties, the propriety, and even the necessity, of a glance, however short, at the labours of our predecessors.

Whoever has looked with sufficient care into the history of our institutions, is aware that America has never yet been foremost in promoting original research; and that whatever in the field of science has been effected here, is due almost exclusively to individual enterprise. Yet notwithstanding their disadvantages, many of our professional men have been honourably distinguished; and others, if they have not attained the foremost rank, have acquired no inconsiderable reputation.

For more than a century after the first settlement of this country, while the colonies were yet subject to Great Britain, the profession of medicine here, in common with most other liberal pursuits, was in the hands of Europeans. Even so recently as within a few years of the Revolution, the youth of America, in order to prepare themselves for the practice of medicine, were obliged to pursue their studies on the other side of the Atlantic. In the southern and middle provinces, medical investigations and medical education first began to claim attention. Many of the early European physicians who settled in these provinces, as well as others who had prepared themselves in Europe, were distinguished for their erudition, and for their extensive acquaintance with the diseases of this continent; and some of them have left important monographs behind them.

South Carolina was among the first in the field of improvement. "In that early period of American medical history," says Ramsay, "which was before Rush began his brilliant career as an author, there were more experiments made, more observations recorded, and more medical writings ushered into public view by the physicians of Charleston, than any other part of the American continent." He mentions with commendation the writings of Lining, Chalmers, Garden, Bull, and Moultrie. Dr. Bull was a pupil of the celebrated Boerhaave; he took his degree at Leyden, in 1734, and was the first American that ever received that honour. His thesis, "*De Colica Pictorum*," is quoted and honourably characterized by Van Swieten. Dr. John Moultrie was the first American graduate of Edinburgh, where in 1749 he defended a thesis "*De Febre Flava*." Dr. John Lining, besides other works, gave us the first accurate history of the yellow fever, in a work published in 1753: and Dr. Alexander Garden, about 1764, published the first account of the bo-

tanical history and medicinal virtues of the *Spigelia Marilandica*. Dr. Lionel Chalmers, besides an account of opisthotonos, and of the weather and diseases of South Carolina, published a valuable work on fevers, in 1767. In this he is said to have unfolded the outlines of the modern spasmodic theory of fever;—a doctrine first hinted at by Hoffman, and subsequently elucidated and supported by Cullen; and upon which the fame of that great man's name is principally established.

In Virginia, among the earliest contributors to medicine, were Mitchell, Clayton, Catesby the naturalist, Tennent, and Robertson. Dr. John Mitchell was the author of a work on yellow fever, written in 1744. Rush acknowledged that he had received many useful hints from it, in the management of this disease. It was first published many years after the author's death, in the *American Medical and Philosophical Register of New-York*.

Dr. Clayton was author of the *Flora Virginica*, printed at Leyden, in 1739, Dr. John Tennent brought to light the virtues of the *Polygala senega*, in 1736.

In New-England, the earliest physician of whom we have any record was one Dr. Samuel Fuller, who came to America in the first ship. Many of the physicians among the early puritan fathers, like the knight-templars of the middle ages, but with far different spirit, bore the combined honours, and performed the several duties of two professions. They were both clergymen and physicians. The puritan clergymen of England had long been taught at home to look to medicine as a means of subsistence in consequence of the persecutions they had suffered there, and before leaving England, many of them had already become eminent in the medical profession. Among the earliest of these clerical physicians, we find the Rev. Thomas Thatcher, who, in 1777, published a "Brief Guide to the smallpox and Measles." This was the first medical publication that ever appeared in America.

Among the earliest cultivators of medical knowledge in New-England, were Hunter, Walton, Douglass, and above all these, the celebrated Boylston. Dr. Wm. Hunter, a pupil of the elder Monro, lectured on anatomy, at Newport, in the years 1754, 5, and 6. His were the first lectures on subjects connected with

the profession in America. Douglass was a Scotchman of some celebrity, and practised at Boston, where he distinguished himself by his violent opposition to the practice of inoculation. His most valuable work was his "Practical History of a New Eruptive Miliary Fever with Angina Ulcusculosa," published in 1735 or 6. This, says his biographer, may be considered a valuable practical essay on angina maligna, in which are detailed the character of the disease, and the method best adapted for treatment. He was one of the first amongst us to resort to the liberal use of calomel in the treatment of acute disease.

The name of Zabdiel Boylston brings us to one of the most important eras in the history of the science, the introduction of inoculation for the smallpox, which he first attempted at Boston in June, 1721. The earliest intimation of the Turkish practice of inoculating for this disease, appeared in the *Philosophical Transactions*, for 1714. (*) The communication was from an Italian physician residing at Constantinople. On the appearance of smallpox at Boston, in 1721, this work was pointed out to Dr. Boylston by the Rev. Dr. Cotton Mather. Boylston was forcibly impressed with the value of the suggestion, and resolved to put it to the test: but other physicians to whom Mather had also shown the communication, not only refused their co-operation, but condemned and opposed the proposal of Boylston in the severest terms. Notwithstanding the excitement which was raised against him, during which his house was attacked by an infuriated mob, his life and the lives of his wife and children threatened, and even openly attacked, Boylston remained unshaken in his purpose. On the 27th of June, 1721, while the smallpox was raging in the city, he inoculated his own son, a child of thirteen years, and afterwards two blacks in his family, and all of them with complete success. The smallpox prevailed until May of the following year, during which time he inoc-

(a) It appears that long before the inoculation for smallpox, as practised in Europe and this country, the Chinese were in the habit of propagating the disease artificially. The plan they adopted was to apply the virus by means of a piece of cotton or other substance, to the nostrils. Dr. Cadwallader Colden, in some remarks, on the subject of inoculation, has given us reason to believe that inoculation for smallpox was practised by the savages of Africa, long before its introduction into Europe.

ulated with his own hand 247 persons ; and after the excitement had in a measure subsided, 39 others were inoculated by other physicians, making in all 286 cases, of whom only six died, and even three of these fatal cases were supposed to have taken the disease in the natural way, prior to their inoculation. Thus the utility of the new practice was fairly established beyond dispute, and it soon became general both in America and in Europe. About the same period Lady Mary Wortley Montague, who had herself seen the benefits of the practice at Constantino-ple, introduced it into England, by having her own daughter inoculated there in April, 1721. This was the only case in which it had been employed in Western Europe prior to Boylston's experiment, and was unknown to him at the time ; so that he has fairly the honour of establishing the practice by an extensive series of experiments in America, and of proving its merits before the profession in Great Britain could be said to have tested it at all.

Sir Hans Sloane, apprized of the eminent services of Boylston, and as is said, at the instance of the king, honoured him with an invitation to London. On his arrival at that city, besides numerous other marks of respect, he was elected a member of the Royal Society, and at the request of that honourable body, before quitting England, he published, in 1726, an account of his practice, which was published at Boston the year following.

Before closing the early history of the profession in New-England, it is but fair to notice the once popular, but now almost forgotten *tractors* of Dr. Perkins. The science of *Perkinism*, as the imagined influence of the metallic tractors was gravely called, was of later date than the period within which we are now limited, namely that which preceded the Revolution : but it belongs to New-England, and more especially to Connecticut, where in 1798, it was first promulgated. It is needless to enter into the minute details of the tractors, and of their wonderful cures in all parts of the old and new world. Suffice it to say, that this fantasy of Perkinism furnishes one of the severest comments ever recorded against the fallacy of human logic and the obliquities of scientific observation, even when exercised by men considering themselves competent and impartial judges, and who under other circumstances might have deserved and claimed the confidence and respect of the profession.

In Pennsylvania, prior to the Revolution, the principal contributors to medicine were Kearsley, Cadwallader, Bond, Thompson, Bertram the naturalist, and others to be mentioned among the founders of the first school of medicine in Philadelphia.

Dr. John Kearsley published in the *Gentlemen's Magazine* for 1769, a paper on the angina maligna of 1746 and 1760. Dr. Cadwallader, an essay on the iliac passion. Dr. Thomas Bond wrote an essay on the use of Peruvian bark in the treatment of scrofula, which was addressed to Dr. Fothergill, (who has himself written on the same subject,) and published in the *London Medical Observations and Inquiries*. He was a practical surgeon, and distinguished as a successful lithotomist. In the latter part of his life, after the establishment of the school of medicine, he aided the undertaking by his clinical instructions at the Pennsylvania hospital.

Dr. Adam Thomson was the author of a discourse on the most proper treatment preparatory to inoculation for the small-pox. He states, that inoculation had been so unsuccessful in Philadelphia that many were disposed to abandon it. Whereas by preparing his patients by means of antimonial and mercurial medicine before inoculating them, he had for twelve years met with uninterrupted success.

In New-York, among the earliest contributors to medical knowledge, were Colden, Middleton, Jones, Samuel Bard, and Bayley.

Cadwallader Colden, formerly lieutenant-governor of this state, was a man of the most profound and varied acquirements. His fame rests more upon his writings in natural history and philosophy, than on any of his strictly professional productions; the principal of which were the history of the prevalent diseases of this climate, and his account of the fever of 1741 and 2, of which he pointed out the causes, for which also he showed the means of prevention so clearly, that the corporation of the city returned him their vote of thanks. Dr. Jacob Ogden is principally known by his letters on the malignant sore throat distemper, dated 1769 and 1774. He was among the first, if not the very first, to introduce the liberal use of calomel in the treatment of acute inflammatory diseases.

Dr. P. Middleton was the author of a letter on croup, address-

ed to Richard Bayley. He and Dr. John Bard, in 1750, conducted the first dissection that ever was performed in America. Their subject was a convict. They injected the vessels for the instruction of their pupils. Middleton was also one of the most active in founding our first school of medicine; and in advocating the establishment of the New-York Hospital.

Dr. John Jones was an accomplished surgeon of great experience. He was the author of "Plain Remarks upon Wounds and Fractures," published in 1775, for the benefit of young men about to enter the American service. This work was imperiously called for at the time, it was constantly referred to during and after the war, it underwent several editions, and was of invaluable service in preparing for active duty a number of badly educated men, who had had few or no previous opportunities, and who had access to no other work than this for guiding them in the exercise of their profession. Jones was also professor of surgery in our first college.

The principal literary production of Samuel Bard, previous to the Revolution, was an essay on angina suffocativa; the views advocated in which he afterwards honourably relinquished in favour of those of his friend Bayley. Long after the time now referred to, he published a useful compend of midwifery. He ranked for many years at the head of the profession in this city. Bard, in general practice, was disposed to trust much to nature, to abstinence, and good nursing; and was no friend to systematizing. "New names," says he, "are always deceiving; new theories are mostly false or useless; and new remedies, for a time, are dangerous. This rage for novelty pervades our profession, especially in this country. Hence our extended catalogue of new fevers, and hasty adoption of new remedies; hence the unlimited and unwarranted application of mercury without weight, brandy without measure, and the lancet without discrimination; and hence, I am afraid I may say, the sacrifice of many lives which might have been preserved, had they been left to water gruel and good nursing." In his public address at the college commencement, May, 1769, he advocated the necessity of a public infirmary in this city; and to his exertions, aided by those of Middleton, Jones, Colden, and the Earl of Dunmore, then governor of the province, we owe the establishment of the New-York Hospital.

Richard Bayley, the last to be enumerated, but not the least worthy among the cultivators of medicine in this province, was the author of a letter on croup, addressed to his instructor, Dr. Wm. Hunter of London. It was not in fact published until 1781; but the views contained in it had already been made known to many, and they were first published by his friend, the celebrated Michælis, in Richter's *Surgical Repository*. He was the first to establish the inflammatory nature of this disease, and to distinguish it, by a comparison of pathological appearances, from angina maligna; with which, up to his time, it had been commonly confounded. His views were of the utmost value, and led to a happy and complete revolution in the treatment of this disorder.

The only schools established for medical instruction in this country before the Revolution, were those of Philadelphia and New-York.

As early as 1762, Dr. Wm. Shippen of Philadelphia, after having completed his education in Europe, commenced a private course of lectures on anatomy and midwifery, to a class of ten pupils, one of whom was the celebrated Rush. In 1765, Dr. Morgan commenced a similar course on the theory of medicine, including materia medica and pharmacy. This last gentleman soon afterwards addressed a letter to the trustees of the Philadelphia college, recommending the establishment of a medical school under their auspices: whereupon he was appointed professor of the institutes of medicine, and Dr. Shippen of anatomy and surgery. In 1768, Dr. Adam Kuhn, a pupil of Linnæus, returning home, was chosen professor of materia medica; and in the following year, Dr. Benjamin Rush, having completed his studies in Europe, was called to the chair of chemistry. Thus in 1769, the first faculty of the Philadelphia medical school was organized, the venerable Dr. Thomas Bond officiating as clinical instructor in the hospital of that city. In the establishment of that school, no man deserves greater credit than Dr. Morgan; and, says his biographer, "the historian who shall hereafter relate the progress of medical science in America, will be deficient in candour and justice, if he does not connect the name of Morgan with that auspicious era in which medicine was first taught and studied as a science in America."

The establishment of the first medical school in New-York, was principally effected by the exertions of Drs. Peter Middleton and Samuel Bard. While pursuing his studies in Europe, Dr. Bard had formed the plan of a medical school in his native place; and on returning home, had the credit of finding himself associated in the project with a number of distinguished practitioners. Dr. Middleton addressed a letter on the subject to the trustees of Kings, now Columbia college, and in 1768, the medical school of New-York was organized, with the following faculty:—Dr. Peter Middleton, professor of physiology and pathology; Dr. Samuel Clossy, professor of anatomy; Dr. Samuel Bard, professor of theory and practice of medicine; Dr. John Jones, professor of surgery; Dr. James Smith, professor of chemistry and materia medica; Dr. John B. V. Tennent, professor of midwifery.

These two institutions gave promise of great benefit to the community; but the Revolution commencing soon after their establishment, many of their professors were called to more urgent duties; and the agitated state of public affairs for several years afterwards, in a great measure deprived the public of the benefits they might otherwise have experienced from them.

Such, then, is a brief account of the progress of medicine in America up to the time at which the colonies declared themselves independent of the mother country. From this period until after the war, little else was effected than the introduction into use of a few of our indigenous plants; as the *Lyriodendron tulipifera*, the *Cornus Florida* and *Quercus alba*, which in combination were used successfully as a substitute for the Peruvian bark, at that time scarcely to be procured.

To recapitulate the labours of our physicians in the cultivation of their profession up to 1776, they were as follows:

1st. In furnishing statistical accounts of the climate and diseases prevalent in different sections of the country:

2d. In furnishing accounts of most of our vegetable productions, and in introducing some of the most useful of them into the materia medica:

3d. In recording the history of the principal epidemics, and some of the endemic diseases: as the influenza, which had prevailed extensively at different periods from the earliest settlement

of the country; the smallpox, measles, and the angina maligna of later date; the colica pictonum, which appears to have been very frequent in the southern provinces; the yellow fever; the fevers of the middle and southern states; and, finally, the croup:

4th. In the introduction of new practice: namely, inoculation for the smallpox; the liberal use of calomel in inflammatory diseases; the depleting and the depressing practice in the treatment of angina trachealis:

5th. In the publication of a useful surgical guide for the instruction of our army and navy surgeons:

6th. In the establishment of hospitals and medical colleges for the benefit of the sick poor, and the competent instruction of youth about to enter upon the duties of the profession.

Soon after the return of peace, those who had been most active in the cultivation of the profession before the war, began again to direct their attention to the same object. The colleges of Philadelphia and New-York were in due time re-organized, and new schools were opened in other places. State and county medical societies were established; medical literature again revived; medical and philosophical transactions were encouraged; and, finally, medical periodicals appeared. So that at the commencement of the present century, the country in proportion to its population, contained almost as great a number of scientific and well educated practitioners, as at any period since. Four well regulated medical colleges were in operation: the pupils of these had already added to our stock of knowledge by their original dissertations on our climate, our prevalent diseases, and the virtues of many of our indigenous plants; our state and county societies were holding out inducements, by rewards and other means, for urging our practitioners to useful and original research; Rush, and Miller, and Benjamin S. Barton, and Mitchell, and Elihu H. Smith, had commenced their career of authorship; the interest felt by the community in their labours had induced others out of the profession to assist in their researches; Webster's well known work on pestilential diseases had appeared; and the Medical Repository had been three years before the public.

These, then, were the starting points for all that the profession in America has since accomplished.

Their efforts at improvement have been both numerous and important; and the high esteem in which these have been held in all quarters of the globe, should be deemed an inducement sufficient for urging us to new exertions.

It is not our intention, on the present occasion, to enter minutely into the history of our individual institutions. Our *medical colleges*, which at the commencement of the present century were limited to four, have since increased to nearly thirty: an increase altogether uncalled for, and the effect of which has been rather injurious than beneficial. The free trade and no monopoly principles of Adam Smith, how beneficial soever in commerce, in those branches of industry to which he himself would have applied them, or in those occupations in which men may look directly to a full return of remuneration for his enterprise or labour, have a chilling and unkindly influence upon science: they should never have been extended to our halls of learning; and least of all, to a class of institutions, which in this, as in all other countries, require protection and encouragement rather than opposition.

The facility with which charters can be obtained for medical schools in this country, and especially in this state, has had no good influence upon the profession. And the establishment of these in unknown villages, and in remote settlements scarcely yet reclaimed from the wilderness, where no infirmaries exist, and where students have no opportunities for practical instruction, serves but to diminish the usefulness of older and better institutions.

The efforts made by these woodland schools have another evil tendency. The inducements held out by them for individual patronage, are, diminution in the expenses and in the period of study. Their requirements for graduation are consequently not sufficiently elevated; and in this way numbers of badly educated men are thrown upon the public. In our larger cities, however, where men of experience and varied professional acquirements can be obtained as professors; and where hospitals, infirmaries, and dispensaries, are at hand for clinical instruction, our colleges have always merited the respect and confidence of the profession.

In periodical literature, the practitioners of this country are

behind those of no other nation. In New-York was published and supported for some twenty-three years, one of the earliest and ablest medical and philosophical journals that ever appeared in any country.

In the autumn of 1796, Dr. Elihu H. Smith, a man of much refinement and rare acquirements in the profession, conceived the project of a medical periodical. He communicated his plan to his friend Dr. Edward Miller, and they together laid the design before Dr. Samuel L. Mitchell, who had just returned from Europe. They all three united in the enterprise, and pursued it with so much vigour, that in August, 1797, the first number of the New-York Medical Repository made its appearance. This work, the first of its kind, was warmly received and ably supported. In its pages are to be found valuable records of our epidemics, and the other diseases of this country. Beginning with the yellow fever of 1793, it contains the complete history of that disease up almost to its last appearance here. It contains the most ample records of the spotted fever, a very fatal disorder that prevailed in the northern and eastern parts of the United States, from about 1807 until after the late war. It contains valuable memoirs on the typhoid pneumonia that committed such havoc among our soldiers, and spread to different parts of the country during the years 1813 and '14, and for a short time afterwards. It is rich in medical topography, and in the chemistry of the day, on which latter subject the celebrated Priestley was one of its diligent contributors.

From this as a parent stock, says the Rev. Dr. Miller, have sprung a number of similar works in Europe and America. "The Medical and Philosophical Journal of London was commenced soon after the appearance of the Medical Repository, with the avowal of its editor that he took the hint from New-York. Other editors in London, Paris, Edinburgh, and Bremen, in a short time started similar journals," and in this country they have multiplied even more rapidly than our medical colleges, and with much the same effect. At present they are not so numerous as formerly, but the interests of the profession have not suffered on this score. With the addition of a well conducted medical quarterly in this city, we would have as many as are needed. And, no doubt, now that New-York is awakening to a sense of shame

for having allowed her own former and well conducted journals to be discontinued, and for supporting, to the detriment of her own citizens, a foreign review, (able enough in itself, but of no great use to the practitioners of America,) she will soon blush at the lethargy for which of late years she has been characterized on this point; and once more bestir herself to regain her former stand.

The medical literature of America, within the last forty years, has been enriched by a number of well digested compends on anatomy, chemistry, botany, materia medica, pharmacy, therapeutics, physiology, hygiene, pathology, midwifery, practical medicine, and surgery; by original works on several of these subjects: by some few works of higher rank, embracing original researches, especially in medical jurisprudence, in the theory of disease, and the philosophy of epidemics: not to mention an immense number of valuable monographs and detached essays, in almost every branch of the profession. To enter into an account even of the most valuable of these, would occupy more space than we can properly devote to them at present; suffice it therefore to say, that though our offices and libraries are crowded with foreign text books to the exclusion of our own works, (a state of things owing for the most part to the rivalries between our different schools) yet the writings of American authors, especially on all practical subjects, are sufficient of themselves to place our practitioners on a rank, equal to that of the practical men of the profession of any other nation; and furthermore, that in this country they are our best and safest guides. Many of our authors too, under estimated at home, are held in high and deserved repute in Europe. In support of this we may state that Wistar's Anatomy was at one time the text book in the University of Edinburgh; and that for some years back, and even at the present time, Beck's Medical Jurisprudence is the most popular work on the subject in Great Britain and Ireland. The writings of Godman and Anderson are occasionally quoted by the French; and those of Dr. Edward Miller, the former president of our college, gave the first suggestions towards what, by Broussais, has since been called the physiological doctrine of disease.

We have mentioned Edward Miller; and, could time permit,

would fondly dwell on the merits of a physician, concerning whom, those amongst us who have been some five-and-twenty years in the profession, may have a distant recollection. To many of the rest of us, the name is, doubtless, new. Rush has declared of him, "that he was inferior to none;" and those of us who have compared the writings of these two great masters of the profession, have sufficient reason to know, that this acknowledgement of Rush was as true as it was honourable.

Miller was a close and constant observer; and so ably has he investigated the pathology of fevers, that Broussais has since awarded him the honour of having been the first to arrive at a knowledge of their true nature. "He was the first," says Broussais, "to consider the stomach in its true physiological relations. Under his pen, the phenomena of fever and the *modus operandi* of medicines, have acquired an interest which they had never had in our systematic works, even the most celebrated. How is it, therefore, possible," exclaims Broussais, "that having so happily commenced, he should have rested here, without discovering the whole of the physiological doctrine which we now-a-days profess!" But the pupils of this celebrated theorist, who have already forsaken him, can best give the true response to this apostrophy. Miller was too much the admirer of truth, and too close an observer of nature, to be carried away by any theory, even by his own, to the extravagant extent of Broussais. "Whatever advantages," says he, in the prospectus to the *Medical Repository*, "whatever advantages may have been temporarily derived from certain elaborate theories, it is chiefly by the new spring which they have given to the mind, and by the more accurate investigation of natural phenomena, to which they have excited others, that they have been permanently useful. Our knowledge of nature is too limited, our collection of materials too scanty, to enable even the most diligent and industrious to frame a correct theory."

In the exposition of his views of fever, Miller gave but a digest of his own observations, and, as before remarked, we can clearly discover in them the dawnings of Broussais's doctrine: and notwithstanding the pains taken by this distinguished master to shield the originality of his own system, I am well convinced, even by his own acknowledgements, and without charging

him with plagiarism, that he might have found in the writings of American authors, (I mean more especially in the collected labours of Rush and Miller,) the elements of every thing that is useful, and of almost every thing that is true in his own doctrine.

He has acknowledged that Rush should be classed amongst those who have contributed to the overthrow of the Brunonian system; and to the introduction of what all the efforts of Sydenham had failed to introduce: the antiphlogistic treatment. The philosophic spirit of Rush, he admits, is also manifest in the entire proscription of the nosologists. "But," says he, "notwithstanding the services thus rendered by him, 1st, in pleading for the antiphlogistic practice; 2d, in proscribing the systems of nosology; 3d, in labouring to overthrow the doctrine of specific diseases; Rush has not given much importance to the irritability of the stomach and bowels in the production of diseases, although he has ably contributed to the treatment of such of them as are acute."

Now we have already seen from Broussais's own acknowledgement, that Miller had actually accomplished what Rush had left undone. With facts like these before us, to whom belongs the glory, if any be attached to it, of first suggesting the principles upon which has since been founded the whole system of physiological medicine?

Benjamin Rush, to whose doctrine we have just alluded, was the promulgator of what has scarcely with propriety been called "the American System of Medicine," a system that was never taught, so far as we know, in any other than the University of Pennsylvania. At the time of commencing his career as a teacher, the doctrines of Cullen were in the height of their popularity; for although Brown had already reared his well known system against them, his influence had not yet been sufficient to subvert them, or drive them from the schools. Rush, however, in his opposition, both to them and to those of Brown, met with more success.

The burthen of Rush's doctrine was to establish the unity of disease. "I use the term diseases," says he, "in conformity to custom: for, properly speaking, disease is as much a unit as fever. It consists simply in morbid action or excitement in some part of

the body. Its different seats and degrees should no more be multiplied into different diseases, than the numerous and different effects of heat and light upon our globe should be multiplied into a plurality of suns." In defence of this doctrine he made bold attacks upon those of his predecessors, especially the nosologists. "By the rejection of the artificial arrangement of diseases," says he, "a revolution must follow in medicine. Observation and judgement will take the place of reading and memory, and prescriptions will be conformed to existing circumstances. The road to knowledge in medicine, by this means, will likewise be shortened: so that a young man will be able to qualify himself to practise physic, at a much less expense of time and labour than formerly; as a child would learn to read and write by the help of the Roman alphabet, instead of the Chinese characters."

With promises such as these in favour of our natural indolence, no wonder the doctrines of Rush spread throughout the nation like meteor lights; but like these also to be almost as evanescent. A revolution indeed has followed in the profession; but in the overthrow of older doctrines, it has involved his own; observation and judgement are indeed more relied upon than formerly, but reading and memory are as necessary as ever; prescriptions, too, are made conformable to circumstances; but they consist not merely in unlimited depletion. The road to knowledge!—has it been shortened?—or is the road, by observation and judgement in connexion with that of reading and memory, shorter than that by reading and memory only? Rush himself lived long enough to see the fallacy of this. False, however, as were his views at the commencement, supported by his eloquence, his urbanity, his honesty, and profound acquirements, thousands of pupils were attracted to listen to him. He gave an impetus of popularity to the school of Philadelphia, which has continued to support it to the present day.

Rush's theory of fever has long since been exploded: we shall not, therefore, enter into the details of it. In his own practice, more especially in his riper years, theory was subservient to judgement. He has left us descriptions of epidemics, and of many individual diseases, in which, for fidelity to nature, and just therapeutical indications, he cannot be too closely imitated. By his

immense amount of useful observations he has been a benefactor to the profession. But in the hands of his early followers, the simplicity of his theory too often has been everything, and the practice that resulted from it has led to many a fatal issue.

In the philosophy of epidemic and endemic diseases, the literature of America is peculiarly worthy of notice. In no country has the subject been so thoroughly investigated as here: and in no other place so thoroughly as in our own city. The writings of Bayley, Rush, Miller, Elihu H. Smith, Seaman, Pascalis and others, furnish a rich fund of original information on this subject; and constitute what Miller has emphatically characterized as "the American doctrine concerning the origin and propagation of endemic and pestilential diseases."*

Richard Bayley, of whom we have before spoken, in 1795 published a work on the yellow fever of that year, in which he proposed a distinction between contagious and infectious disorders. "This distinction," says the late Dr. Hosack, (himself in some degree opposed to Bayley's views,) "is in my opinion an approach nearer to the truth than any of his predecessors have advanced, but it does not present us with a view of the whole truth upon the subject."† Dr. Miller, following up this distinction, has carried the investigation farther, and pointed out divisions among the infectious classes. The views of Dr. Hosack were not in accordance with either of these writers, nor with those of the great body of the profession here. They are, however, worthy of consideration; but as we cannot enter at present upon this once fruitful source of disputation, we must refer to his own exposition of them, in the 2d vol. of the *American Medical and Philosophical Register*. The subject was finally taken up by one who has proved himself competent to unravel it; and to the classical production of Dr. Joseph M. Smith, we must refer for the most beautiful, if not also the most thorough exposition of the laws regulating the rise and prevalence of epidemic diseases, that has ever yet appeared.

In the pathology and treatment of several diseases, the physicians of this country have introduced important improvements.

* Preface of the 9th vol. of the *Med. Repos.*

† *Amer. Med. and Philosoph. Register*, vol. ii. p. 15.

We need not again refer to those already mentioned. The management of our pestilential diseases; the pathology and treatment of dropsies, especially dropsy of the head, first instituted by Rush, and since adopted in Europe; the treatment of cholera infantum, as suggested by Miller; of dysmenorrhœa, as suggested by Dewees; of delirium tremens, as suggested by Knapp; of hysteria, as suggested by Dr. J. M. Smith; and of lunacy, as practised in our asylums: are all important landmarks in the history of American medicine.

But to surgery, more than any other practical branch, are we to look for our trophies in the profession. The reckless and unnecessary resort to operations, by men whose principal qualification is a daring disregard to human suffering, we are as much disposed to deprecate as any one; and hail that auspicious era, in which praise can be more willingly awarded to him that saves his patient from the knife, than to him that operates. Yet when other measures fail, and the bistoury or scalpel is the last, or least deplorable alternative, the surgeon, who by his knowledge of the human structure, and the principles of his art, has the head to devise and the hand to perform original and successful operation, should be deemed an honour to his profession, and a benefactor to his species. Among the men of this class, America has many to be proud of.

To enumerate the original and important operations; the introduction of new ones from precedents elsewhere; to cite the improved modes of practice, by which severe operations have been avoided; the advances in surgical pathology; the additions to our *armamenta chirurgica*, and the improvement in instruments already long in use; must be to prove that in no place has surgery been more successfully cultivated than in this country. The names of Bayley, Jones, Physick, Post, McKnight, Dorsey, Nathan Smith, and Hosack, among the dead; of Mott, Stevens, McClellan, J. Rhea Barton, Rodgers, Warren, Dudley, White, Gibson, Muzzy, and a host of others among the living, are worthy of the highest rank among the surgeons of their day, for their share in these improvements.

In the excision of bones, Dr. Mott's removal of the clavicle, in 1828, his operation for extirpating a greater part of the lower

jaw, in 1821; Dr. Stevens's operation on the upper jaw, in 1823,* his extirpation of the astragalus, in 1826; Muzzy's removal of the scapula and clavicle together, in 1837; and Dr. R. Butts's removal of the ulna, published in 1825; are, so far as we know, all original and successful innovations. Besides which, Drs. Brown and Hunt's operation for dissecting out the head of the humerus and fractured portions of the scapula, on a soldier injured at the battle of Plattsburgh, in 1814, with the effect of saving both the limb and the use of the joint, is worthy of special observation.

In operations for diseased joints, Dr. John Rhea Barton has rendered himself conspicuous. His operation for artificial hip joint, in 1826, and that for straightening an ankylosed and contracted knee, in 1835, were peculiarly original and successful. In the first of these he has been followed by Dr. John Kearny Rodgers, of this city, also with success:—and these two are the only operations of the kind that have ever been performed.

In the treatment of diseased bursæ and of hydrops articuli, as practised by the late Dr. Hubbard of Yale College, the surgery of the joints has been improved. In the treatment of morbus coxarius, Dr. Physick's apparatus is worthy of praise. It has been applied successfully by other surgeons, especially by Dr. A. H. Stevens, in treating the diseases of other joints. Dr. Physick's operation for ununited fracture, too, is known, appreciated, and successfully employed both at home and abroad.

The mode of arresting capillary hemorrhage by exposing wounds for a time to the air, so as to expedite the adhesive process after capital operations, first adopted by Dr. David Hosack, in 1813, (who, at that period, devoted much attention to surgery,) is worthy of special notice here; inasmuch as it has since been

* In the 20th vol. of the *Medico-Chirurg. Transactions*, the credit of first having removed the upper jaw, is attributed by Mr. Liston to Mr. Lizars of Edinburgh. The operation of Dr. Stevens, and subsequently that of Dr. David L. Rogers, then of this city, were both antecedent to that of the Scotch surgeon, and were completely successful. An account of Dr. Stevens's operation, which was performed on the 13th of August, 1823, may be found in the appendix to Sterling's Translation of Velpeau's *Surgical Anatomy*, N. Y. 1830. Dr. David L. Rogers's operation was performed in May, 1824, and was published in the 3d vol. of the *N. Y. Med. and Phys. Journal*. Mr. Liston, in his historical notice of operations on the upper jaw, makes no mention of either of these.

recommended by the surgeons of Edinburgh, who, doubtless unaware of Dr. Hosack's claims, have taken to themselves much credit for the practice.*

In the operation for artificial anus, Dr. Physick, in 1809, successfully instituted a practice which has been imitated in other countries, and is claimed by the French as one of the inventions of Baron Dupuytren.

In the operation on spina bifida, by excision, Dr. Sherwood, of Rutland, in 1811, was completely successful; and about a year since, Dr. A. H. Stevens succeeded in curing an aggravated case by a modification of Sir A. Cooper's practice by puncture.

In amputation of the joints, our surgeons, it is true, have no right to claim the precedence; nevertheless, we may refer to Dr. Bayley's amputation at the shoulder joint, in 1782, as among the first successful operations of the kind; Dr. Mott's amputation at the hip joint, in 1824; and Dr. J. Kearny Rodgers's amputation at the elbow joint, in 1825, all successful.

Besides these might also be mentioned extirpation of the parotid gland; orthoplastic operations of various kinds; extirpation of the uterus, and of ovarian tumours; lithotrity, lithotripsy, improved modes of lithotomy, and the removal of calculi from the bladder without cutting; the treatment of aneurism by cold; and the diseases of the anus by dilatation; the Cæsarian section for the removal of the extra-uterine fœtus, and an analogous operation for the removal of metallic bodies lodged in the small intestines; all performed with success, and all illustrative of the rank of this art amongst us.

In operations upon the arteries, the principles laid down by Hunter, and the application of them by himself, Abernethy, and Cooper, have been successfully carried out here; and have led to a number of bold and important precedents, determining what should be, as well as what should not be again attempted in this department of surgery. In these achievements, the name of Post, Mott, Muzzy, Gibson, White, and others, are peculiarly worthy of distinction.

Such, then, is an outline, and but a brief and imperfect one, of some of the most important and memorable points in the his-

* See the Amer. Medical and Philosophical Register, vol. 4, p. 63.

tory of medicine in America. Before drawing to a close, let us dwell for a moment on the state of the profession in this city.

The time was once, and that not half a century ago, when almost all that was known of American medical literature, and almost every thing that characterized it in Europe, resulted from the enterprise and talent of New-York. The face of the profession generally, as well as of the different branches, has materially altered since that period: but though we occupy a more favourable position, and enjoy more extensive views than our professional forefathers, we are nevertheless bound to look with admiration on their labours, and to acknowledge with gratitude the share they have had in our advancement. But these fathers! where are they? Our Bayley, and Bard, and Jones, and Miller, and Middleton; our Elihu H. Smith, our McKnight, Romaine, and Mendenell,—names once familiar as household things,—are now scarcely ever heard of; for the fire of their enthusiasm is extinguished, and the gratitude and fame that should have been awarded them, are smouldering in its ashes.

We would not be understood to say, that since the days of these once distinguished men, the spirit of inquiry, has departed from us: far otherwise. Yet with humiliation be it acknowledged, that ever since their day, the bonds of fellowship which should have held us in unity to the support of one another, and to noble emulation in the promotion of a common interest, have been continually slackening. The spirit of discord has been awake, and the poison of its breath has hung upon us, until it has withered our institutions almost to extermination. Talent and ability have been exerted single-handed; and often, too, opposed by those who should have fostered them. There has been no commanding, and, at the same time, conciliating voice amongst us, to emulate our youth, to urge on our middle-aged to labour, to call upon our advanced in life for the result of their experience, to unite the whole in unison, and to direct the current of popular feeling, as well as of popular interest, towards the advancement of the profession.

Yet our city has advantages for the cultivation of medical science that are not to be surpassed; and though some of these of late years have been unaccountably overlooked, and though for want of well-directed efforts on our own part, other places have

been allowed to take the lead of us in the work of medical instruction; yet no one can deny that while distant schools have drawn together their hundreds of pupils annually, their teachers have had an eye for precedent and practical instruction, to the profession in New-York. We need not again enumerate the splendid achievements in surgery that have been effected here, the improvements in the practice of medicine, the original researches in anatomy, the investigations into the laws of epidemics, or the additions to our materia medica, to bear us out in this remark. Let it then be no longer said, that New-York must forever hold an humble rank as a school for medical instruction: for so long as we have our hospitals and infirmaries to resort to, so long as the name of Romayne, of Post, of Godman, of Hosack, and of Mott, shall be remembered and respected, we have the earnest of better things. Nor are these the only names we should be proud of; we have still,—and long may they continue in their usefulness, to enjoy the blessings of life, and to receive the honours and esteem so justly due to them,—we have still amongst us men whom the medical profession in any country might be proud to claim.

Where, then, lies the bar to the cultivation of medical science, and to the growth of medical institutions in this city? We have the material, and the ability, and the will: let us, therefore, hope for emulation and concert of action, sufficient for investigating the one, and for supporting the other. And when jealousies, and prejudice, and party feeling, shall have been, as we trust they sometime hereafter shall be, if not eradicated, at least restricted in their influence, New-York may again regain that stand which her advantages have ever claimed for her; and from which, had she always been alive to her own true interests, she would never have departed.

ART. II. *Case of Bony Tumour arising from the Pelvis.*

By J. KEARNY RODGERS, M.D., Surgeon to the New-York Hospital, and to the New-York Eye Infirmary.

MR. Henry Hart, aged 29 years, of rather slender formation of body, and of an exceedingly nervous temperament, became my patient in September, 1838. He had a bony tumour connected with the pelvis, and involving the right thigh, of which the accompanying sketch, with the measurements, will probably give a better idea than any merely verbal description. It extends upwards from the pubis, about two inches above the body of that bone, and downwards, two-thirds the length of the thigh. Its outer margin pushes the sartorius muscle and femoral vessels outwards, nearly two inches from their natural course. Its inner margin, although the knees are not nearer together than nine inches, overlaps more than half of the sound thigh. The penis and testis are pushed considerably to the left, and rest on the upper part and left of the tumour. In its posterior aspect, it extends several inches below the margin of the gluteus maximus.

The dimensions of the tumour were taken in the beginning of October, and are as follows :

From the upper margin, at A, to its lower extremity, at C, $11\frac{1}{4}$ inches, in a right line.

Circumference of the affected thigh, with the tumour at D, $34\frac{1}{2}$ inches.

Circumference of the sound thigh, at B, $17\frac{1}{2}$ inches.

Circumference of the tumour, at its base, or as closely as a cord could be passed, at C & F, $34\frac{1}{2}$ inches.

From the base of the tumour, at A, over its surface, to a corresponding point behind, at E., (plate 2nd,) 25 inches.

The fingers can be passed behind the upper end of the tumour to the transverse portion of the pubes, and their ends insinuated between it and the latter bone.

Its outer margin can be distinctly traced on the anterior and posterior aspects of the thigh.

The integuments covering it are healthy, and are traversed by very large veins, forming deep grooves on its middle and lower part, as represented in the plate. The tumour presents no irregularities of surface.

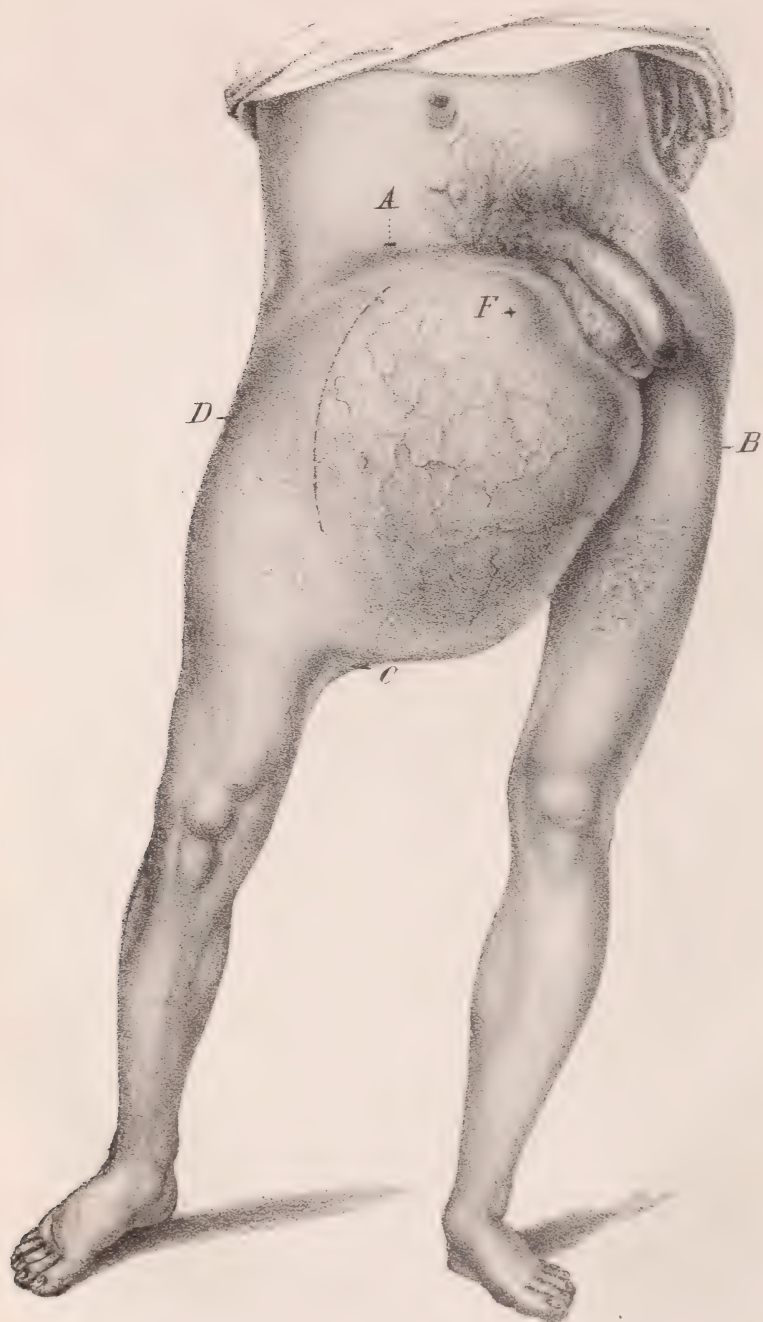
Three-fourths of the tumour, that is to say, the upper and anterior portion, are hard and incompressible, so as to leave no doubt of its being bony in its character. The lower and posterior parts are softer, and yield to pressure. Its attachment appears to be the body, and, perhaps, the ramus of the pubes. It is immovable by any force that has been applied, and so anxious was the patient to test the strength of its connection with the body, that his brother, at his earnest request, endeavoured to raise him by it, with the faint hope, on his part, that its neck might be broken, and then its removal more easily accomplished.

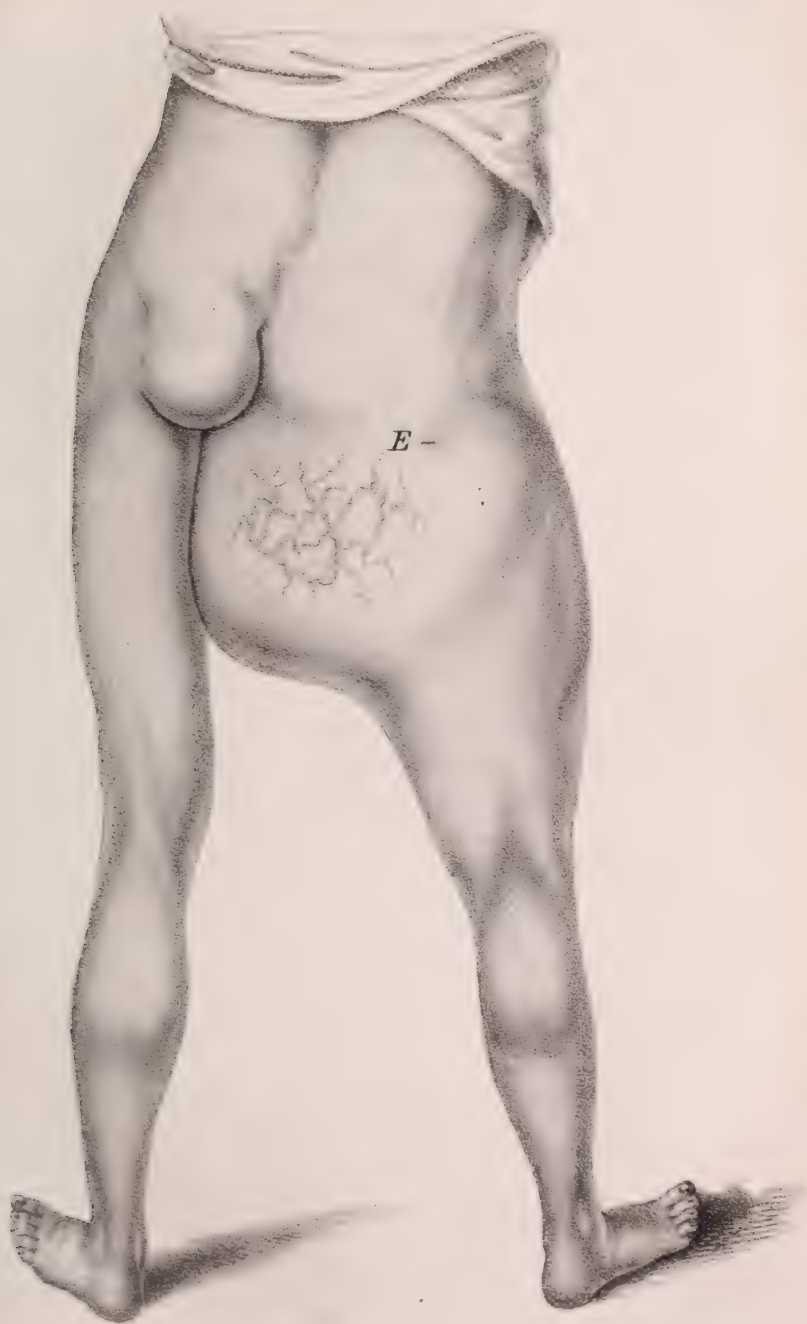
The right thigh is pushed outward by the tumour, and walking is performed with a straddling gait. The flexing of the thigh is materially interfered with. He sits partly on the tumour. Pain is experienced after walking, and also after lying several hours in bed. This latter pain is relieved by rising and walking a few times across the floor.

There is no difficulty in passing his fœces, nor are they flattened. On examination per anum, I cannot perceive any encroachment of the tumour on the cavity of the pelvis. He thinks that at times micturition is performed slowly; which probably arises from the urethra being stretched so much out of its natural course. This, however, is not uniformly the case.

Mr. Hart has been a man of very active habits, and is temperate in his living. Formerly he was subject to colick, but of late years has enjoyed uninterrupted health, with the exception of a slight, but protracted fever, in the autumn of 1837.

The history of the probable cause and progress of the tumour is as follows: in November, 1833, he fell through a trap-door, and struck the right side of the perinæum against a beam crossing the angle of the opening. This was followed for about three weeks, by lameness and pain in the muscles of the upper and inner part of the thigh of that side. This uneasiness subsiding, he thought no more of the accident until June, 1835, when his attention was called to a hard immovable tumour, somewhat





Bufford & Litho.

larger than an egg, situated about the junction of the ascending ramus of the pubes with the body of the bone. In the course of that summer it was occasionally very painful; the greatest suffering being at the inner part of the knee. This pain was alleviated by anodynes internally administered. No other treatment was employed. The swelling increased slowly, but steadily until the autumn of 1837, when I first saw the patient. Its measurements at that time, as taken by Dr. J. Watson, were as follows: circumference of the affected thigh, including the tumour, 26 inches; circumference of the sound thigh, 17½ inches; circumference of the base, as closely as could be obtained, 22 inches. From the crural arch, over the face of the tumour to its lowest posterior point, (that is about half around it in this direction,) 16 inches.

At this time it was hard to the touch in every part of its surface; and although there were many opinions entertained as to its nature, whether it was malignant or benign, whether it contained cells filled with fluid, or was only a shell of bone, or bone throughout, whether its origin was from the more dense or the cancellated structure, no one doubted its being ossific.

In October, 1837, Mr. Hart had an attack of fever, which continued for several weeks, and on recovering from it, had less pain in the limb, but the tumour grew with a much more rapid progress; and of late, its developement has been still more marked.

The anxiety of the patient to procure relief, induced him to show himself to many medical men, and among them to the first surgeons of this city; and the situation of the tumour and its character made the case one of unusual interest to the profession. The opinions he received were various as to its nature, and the practicability of removal, so that he remained in doubt as to the course to be pursued.

In September, 1838, Dr. Gibson, the distinguished professor of surgery in the University of Pennsylvania, being in this city, was requested to see Mr. Hart in consultation with Dr. Gram his attending physician, Dr. Hosack, and myself.

After an attentive investigation of the case, during which the cavity of the pelvis was examined *per rectum*, our decided opinion was stated by Dr. Gibson, of the practicability of removing

the tumour, and the dangers were very fairly stated in the following order :

1st. Of dying from hemorrhage while on the operating table.

2nd. After passing through the operation, of dying within perhaps forty-eight hours from the shock given to the nervous system.

3d. In the event of passing over the two first stated dangers, of sinking under the suppuration, which, in so very large an exposed surface, would probably be profuse.

4th. Of the disease returning, provided it proved to be of a malignant character.

After this full exposition of the dangers of the operation, we were asked whether we would advise its performance, but the adverse circumstances having been so distinctly placed before him, we left it for himself, after consultation with his friends, to decide whether it should be undertaken.

In the beginning of October, he signified his intention to me of submitting to its removal; and as an evidence of his opinion of its dangers, paid all his debts, made his will, and such other arrangements of his affairs as would have been suitable, had he been certain of its fatal termination. The sixteenth of that month was appointed for its performance, and professor Gibson having consented to come on for that purpose, I gladly availed myself of his able assistance, and also of that of professor Stevens, Drs. Hosack, Cornell, and Wilkes; and there were present professor Delafield, and Drs. Gram, Boyd, Watson, A. Dubois, Halsted, and Dixon.

The operation was commenced at twelve o'clock. The patient was placed on the table with his hips, which were somewhat raised, projecting slightly over it; the thighs were separated, and I was thus enabled to sit nearly in the position of the operator in lithotomy. I made a curved incision about thirteen inches in length, from the upper part of the tumour, immediately above the pubes to its lower extremity at a point corresponding with the tendinous arcade of the triceps. Although I had carefully pressed the blood from the veins, a very free hemorrhage took place from these vessels, and I was under the necessity of placing ligatures on many of them. Another incision was made between the same points sweeping over the inner part of the

thigh, and insulating a portion of integument about six inches in width. I now endeavoured to dissect off the soft parts from the tumour. A muscle, evidently the gracilis, was very much flattened and passing over the inner surface. It could not be preserved. The integuments were turned off from the outer side to the sartorius muscle and femoral vessels, but it became necessary to make an incision at right angles from the inner cut, and thus turn off the flaps from the tumour, which after some dissection, was laid bare on its anterior, inner, and posterior part. On taking hold of the tumour at this stage, it was evidently firmly attached, and by a broader base than had been supposed. A longitudinal section was made with a saw nearly to the pubes, and the two halves removed by the same instrument. After several transverse sections, the body and rami of the pubes and ischium were laid bare, and the origin of the disease was ascertained. It evidently arose from the body and ramus of the pubes, and especially that part which forms the margin of the foramen obturatorium. By strong curved knives the diseased bone was now pared off, and nothing was apparent but sound structure.

The operation continued nearly an hour, and was borne by the patient with heroic firmness; but he was in a state of extreme prostration during the latter part of the performance, so that life could only be preserved by the free administration of cordials and stimulants, and the application of sinapisms to various parts of his surface. His pulse was rapid and feeble, extremities and surface generally cold, voice faint. At the end of about two hours the pulse became more firm, and skin warm; I secured several small vessels which oozed, and dressed the wound with sutures, adhesive straps, and lint.

He had in this interval felt great oppression in the epigastric region, from which he was relieved by free vomiting. At nine o'clock, the temperature of the skin was natural, but the pulse and voice very feeble. He had slept, but without being refreshed.

Twelve o'clock, midnight: administered an anodyne of tinct. opii. The patient having expressed a desire to eat an oyster, he was permitted to do so, but it was soon rejected.

Drs. Dubois and Halsted, in whose charge I left the patient during the night, report that he had some sleep; that at five o'clock, A. M. he became insensible; and at six, when I was

called, his extremities were cold, and pulse almost imperceptible. He continued to sink until ten o'clock, when, after an interval of twenty-two hours from the operation, he expired.

The hemorrhage in this operation was not very profuse. A free venous bleeding followed the first wounds in the integuments, but this was soon suppressed, and the branches of the profunda and obturator, from which I anticipated copious bleeding, gave me very little trouble. It was very apparent that his death was to be attributed to the shock given to his nervous system, which was peculiarly sensitive. Early in the operation his pulse faltered and he could only be sustained through it by the administration of brandy, and by occasionally pausing, that he might have an opportunity to rally.

The tumour, after its removal, weighed fourteen pounds avoirdupoise; two-thirds of its upper part composed of cancellated bone, the cells of which were very large, and filled with a white cheesy substance. It could readily be cut with a cartilage knife. The lower and back part appeared to be composed of firm granules of an opal colour and cartilaginous hardness contained in fibrous meshes. The tumour was covered with a cancellated fibrous capsule.

On examining the bone after death, it was apparent that the disease began from the pubes, the cancellated structure of which was enlarged. From the margin of the obturator foramen, formed by the ramus of the pubes, a cartilaginous process was sent, occupying the ordinary situation of the ligament, and apparently taking its place. It was covered on the inner surface by the obturator internus muscle, but did not project into the cavity of the pelvis so as in the least to diminish its cavity. The obturator artery was obliterated.

Was the disease of a malignant character?

I undertook the operation, believing that it was not so, and my opinion was formed from the healthy complexion of my patient; freedom from disease, and the slow progress of the tumour, which was more than three years in attaining its size.

I was apprehensive that it might be necessary, (and was prepared,) to remove the ramus of the pubes, and of the ischium, which certainly would have made the operation more formidable.

What would have been the effects of such a step,—dividing

the ligament of the pubes, and removing the support which these parts naturally give to the pelvic viscera?

ART. III. *Cases of Sensitive Tumours of the Female Urethra. with remarks.* By ALEXANDER E. HOSACK, M.D.

IN May, 1835, I was consulted by a servant woman, in a family where I was in attendance, for a complaint which she said had caused her considerable distress, and, as she expressed herself, it appeared as if something had dropped into the passage immediately after making water, causing her great pain at the moment, and which frequently bled, particularly upon being touched by her linen. Upon the slightest exertion she was seized with bearing-down pains to such a degree as to compel her to take to her bed. These difficulties, she said, had been gradually increasing upon her for two or three years, and being unmarried, she was from delicacy induced to conceal her sufferings until no longer able to bear them.

From this statement I was induced to make an examination, which clearly explained the cause of all her trouble. I discovered two or three little tumours immediately within the meatus urinarius, to which they were attached by a narrow neck. They were of a florid red colour, and appeared to be covered by the delicate lining membrane of the urethra. They were exquisitely sensitive and bled upon the slightest touch. In form they resembled a split pea, varying from that in size to a small kidney bean, and placed upright, in such a manner, as to break the flow of urine. The patient did not however complain of the pain upon urinating as her greatest distress, for it was not to be compared to that caused by exertion, or from contact of the dress, which was frequently excruciating.

By raising these tumours with a probe, I discovered their attachment to be limited to the margin of the urethra, and suggested to her the propriety of having them removed, which I assured her could be readily done, and with comparatively little pain. Having obtained her consent, I snipped them off with

scissors : the hemorrhage was not excessive. In a few days the part was healed, and she appeared to be completely rid of the evil, until about six weeks after, when the sensitiveness and other symptoms returned. In the course of three months I was again requested to relieve her if possible by a further operation. Upon examination, I found the margin of the urethra fringed with the same highly organized structure. It appeared as if the lining membrane had been prolapsed and was turgid with blood ; or in other words, had shot out like a fungus. Under these circumstances I determined to remove the diseased structure by excising the meatus urinarius, and this was accordingly done. The wound in due time was healed, leaving the parts apparently sound, with the exception of a few spots of discoloration in the folds of the nymphæ, which I afterwards destroyed by caustic.

The extremity of the urethra remaining somewhat harder than might have been expected in sound parts, I expressed doubt whether it might not be the incipient stage of schirrhus. The disease, however, in the course of a few months returned with all the distressing symptoms as before enumerated. The patient being again willing to submit to any operation that I might advise, I determined to remove the urethra to an extent that would hold out a better prospect of success. My friend, Dr. Wilkes, with whom I consulted, confirmed this opinion, and assisted me in the operation.

The patient being placed upon the bed in a recumbent position, with the legs flexed upon the body, I began with measuring the length of the urethra, by introducing the female catheter, and marking it the instant the urine began to flow ; this precaution I considered necessary, from the fact that the length of the urethra, in females, is very variable ; at the same time, I was unwilling to encroach too much upon the bladder, which might endanger consequences more distressing to the individual than the existing disease.

The preliminaries being attended to, I seized the fungous excrescence with the *pince* of *Museux*, and drawing it out, I circumscribed the urethra with a knife, carried on the dissection until I had detached about three-quarters of an inch in extent, as I supposed. I then examined the urethra at the upper ex-

tremity of the wound, and finding it perfectly natural and free from all hardness, I separated it at that point. The hemorrhage for the moment, was very great; but by pressure, constantly kept up with a compressed sponge, it was arrested, or so much restrained, as to do away with all anxiety on that account.

The patient having made water a short time previous to the operation, I did not consider it necessary to leave a catheter in the bladder, which I afterwards regretted, as I was obliged to draw off the urine the following morning, but not without considerable difficulty, as may be imagined. I determined, however, for the future, to leave the catheter in the bladder, or at least until the urine should flow at its side; which took place on the sixth day, when I removed the instrument. Since which time, she has enjoyed full control over that organ, and voids urine with comparative ease.

It is now six months, and no return of the disease. No bougie was introduced to keep open the mouth of the urethra, as might *a priori*, have been considered necessary. Indeed, I purposely avoided using it, lest the irritation might predispose the parts to a return of the disease. Upon examining the part removed, I found the urethra to be very much thickened and hardened at its extremity, but this circumstance not being observed in other instances of this disease as related by different authors, I must conclude that it had no agency in the growth of these tumours, but was probably the result of irritation.

I first met with this disease, in the practice of my friend, Dr. Mott, who, several years ago, was consulted by a gentleman on account of his daughter, who laboured under this distressing complaint. The case was one of great interest, both from the circumstance of the patient being at the delicate age of eighteen, and on the eve of marriage. She had suffered from this disease for two years and upwards, and considering it an insurmountable objection to marrying, had frequently deferred the nuptial ceremonies, at the same time not willing to break off her engagement, and unable any longer to conceal her actual situation, she disclosed the true cause to her father, the only surviving parent, who immediately came to New-York, and placed her under the care of Dr. Mott.

In this case, Dr. Mott, after carefully examining the disease,

determined upon removing the *meatus urinarius*, to the margin of which two or three small flattened and vascular tumours were attached. They were of the size of small beans, highly florid, and exquisitely sensitive. The wound healed kindly after the operation; the result was perfectly successful, when she returned home to her friends, and afterwards married.

REMARKS.

Although this disease is one of comparatively rare occurrence, much has been written upon it; still, elaborate works on surgery and midwifery, have not, with but one or two exceptions, in any way noticed its existence. I confess it appeared to me to be quite a novelty; and as regards the excising of part of the female urethra for its removal, or for any other object, I do not recollect ever to have heard of a single instance; nor have I yet been able to discover that it has been done to any extent, beyond the mere margin of the external orifice of the urethra. This disease is first spoken of by Morgagni, who, under the head of excrescences and other diseases of the female urethra, remarks: "examining the body of an old woman about the beginning of 1751, I met with a small triangular excrescence within the external orifice of the urethra, but it was not prominent;" and, in another part of the same chapter, he goes on to state, "that there is a red and fungous excrescence, which is of the size of a bean, sometimes to be observed attached to the orifice of the urethra."

This disease is also described by an Englishman by the name of Hughes, of Stroudwater, in Gloucestershire, in 1769. In a case described by that gentleman, he speaks of it as of "a red colour, and of a softish, spongy texture, with an irregular, jagged surface; was sore when touched; and a bloody serum oozed from it." The patient was eleven years of age, and of a very thin habit of body; it had existed for three years. In this case, Mr. H. removed the *Meatus Urinarius*, which completely included the disease. The patient suffered for some time from retention of urine; only, however, during the healing process. Five years had elapsed since the operation, and the patient continued perfectly well.

"On examining the fungus, after the operation, it appeared about the size of the nipple of an adult; its anterior part being expanded, formed, as it were, a little cup, with its border indented like a cock's comb, having a hole in its bottom which was the orifice of the urethra, which ran through the body of the fungus; the internal membrane of the urethra was continued to the edge of the indented border, which was of a deeper red colour and softer texture than the other part of it."

In volume XIII. page 784, of the *Lancet*, Mr. Wardrop has published four cases of this disease. The first was in a young girl thirteen years of age; the second in a lady of thirty years of age; the age of the third is not given; the fourth was upwards of sixty years old. In all of these cases Mr. Wardrop speaks of the exquisite sensitiveness as the most prominent symptom. In one of the cases above alluded to, the disease returned after marriage, when the patient again applied to Mr. W. for relief.

He states "that the tumour had now assumed the appearance of a bright scarlet fungus, encircling the meatus, and was attended with such exquisite tenderness as to prevent sexual intercourse. The orifice including the disease was removed, and it did not return."

Boyer makes mention of a fungus occurring in the female urethra. It is however noticed in a more particular manner by Bromfield, and according to Mr. Hughes, accounts are also given of it by Sharp, Warner, and Jenner. Mr. Wardrop also refers to Chaussier and Dubois, and states that it is particularly noticed by Madame Lachapelle as well as by Rosenmuller, Vogel, Kaldibrand, Drochaska, and some other German pathologists.

In many of the instances referred to by the older writers, the symptoms were at first mistaken for those of stone in the bladder, and in the case just related by Mr. Hughes, the disease was mistaken by those who were first consulted for prolapsus of the uterus, and actually treated as such, nor was the error discovered until the patient was unable any longer to bear the pain consequent upon the pressure applied to that viscus.

By reference to the foregoing cases we arrive at the following conclusions:—

1st. That the disease is characterized by peculiar symptoms.

2d. That it is not confined to any age.

3d. That it is unaccompanied with discharge, unless the parts be chafed or abraded.

4th. That, in order to prevent a return of the disease, it is better to remove, at once, the external orifice of the urethra, including the tumours.*

5th. That it is a complaint of slow growth, and does not attain to any great size; for, in no instance yet recorded, so far as I am enabled to learn, has it been found larger than a small cherry.

ART. IV. *An Essay on Cancer of the Uterus.* By JOHN A. SWETT, M.D. (Read before the New-York Medical and Surgical Society, Sept. 1, 1838.)

I PROPOSE to offer to the Society some observations on cancer of the uterus, founded upon fifteen cases of the disease, more or less perfect in their details, collected during the last six years. The result of my observation has been, that cancer of the uterus is a disease simple in its elementary characters, uniform in its history and progress; the result of my reading on this subject has been of a different character, leading to a good deal of uncertainty and confusion. The reason for this, appears to me, to reside principally, if not wholly, in the fact that authors have confounded under a common name, diseases entirely different in their nature and pathology. "What is cancer?" says M. Andral. "In my opinion, it is no particular change in the organization of parts. Every lesion either of nutrition or of secretion, which terminates in incurable ulceration, this is cancer." This false and unphilosophical view of the subject, was but the expression

* *Note.*—The only inconvenience to be expected from removing the *Meatus Urinarius*, will be that of retention of urine. This is not, however, a necessary consequence; for among all the authorities quoted, but two cases are mentioned in which it occurred; one related by Mr. Hughes, and the other by myself. In both instances they were spontaneously relieved, on the fifth or sixth day.

of the general sentiment at the time it was written. No wonder then, that with such loose notions prevailing, the student of books should find little to aid him to settle the principles of correct diagnosis.

PATHOLOGY.—The true cancer of the uterus appears to me to be a secretion, *sui generis*, deposited in the molecular structure of the organ. Like most other foreign deposits, it affects a preference for particular portions of the organ, passes through certain regular determinate stages, and is dependent upon causes we term constitutional.

If we examine the uterus during the early stage of the cancerous deposit, the first sign of change is, that the part affected (and in a great majority of instances this is the neck and that alone,) is more pale and dense than natural, without being at all increased in size; for the morbid deposit simply takes the place of, without being added to, the muscular tissue of the organ, which becomes gradually absorbed as the disease advances, so that at length no traces of it remain. It is not common, however, for the deposition of cancer to cease with the complete absorption of the natural tissue; it frequently goes on until the diseased organ attains to three or four times the size of the healthy one. I have never seen it exceed this, even in cases where large masses of cancerous matter were deposited in the tissues of other organs. This primary change in the structure of the uterus, can only be accurately established by the careful study of cases where the neck of the organ has undergone a complete transformation, so as to leave no doubt as to the nature of the disease, and where the body and fundus, subsequently affected, present the characters above described. The fundus appearing simply more pale and dense than natural; the body exhibiting distinct matter of a linear form, of a dead white or blueish tinge, mixed with the pale, but easily recognised natural tissue, giving to the part a variegated or marbled aspect; until, on arriving at the neck, we find this portion completely converted into a firm dense mass, with difficulty divided by the scalpel, presenting an uniform smooth surface, without trace of organization, still preserving, more or less completely, the natural form of the organ. This, the first stage of the cancerous deposit, is well known to pathologists under the different names of schirrus, schirroma, tissu, lardacé, &c.

After a longer or shorter interval, probably varying greatly in its duration in different cases, sometimes before, sometimes after the complete conversion of the uterus, the cancerous deposit undergoes a new change; it begins to soften, commencing as before, in the neck of the organ and gradually extending towards the fundus, a fact easily ascertained by dissection. As the softening process advances, you notice the following changes in the mass; first, some traces of imperfect organization, indicated by the appearance of small red lines or spots; secondly, the mass from appearing uniform and homogeneous in its structure, presents an areolar or molecular structure, especially when torn. (*Cancer pultacé of Cruvehlier.*) But the process of softening does not stop here; it gradually goes on until the dense schirrus is converted into a thick white liquid resembling perfectly in appearance lime prepared for white-washing, which, first formed at the neck, finds a ready passage through the vagina, accomplishing, at the same time, the more or less rapid destruction of the organ.

Such, so far as I have been able to observe, is the pathological history of cancer of the uterus. That this morbid deposit is essentially the same, in its most important characters, with the true cancer of other organs appears to me clear from the fact that they sometimes, though less frequently than I had supposed, exist together in the same individual. I have, however, never yet seen the schirrus deposit in the uterus pass into what is called by pathologists, encephaloid matter, which I am convinced, by sufficient examination, is but the transition stage from the dense firm schirrus, into the pultaceous and liquid state. In a very remarkable case of cancer of the lungs, this fact was most clearly demonstrated. Indeed, it appears to me highly probable, that the form of cancer called encephaloid depends very much, if not entirely, upon the natural density and degree of resistance in the tissue, the seat of the deposit, and, consequently, that it is most frequently found, so far as I have noticed it, in the substance of organs of a loose texture as the lungs or liver, and in one instance under the mucous membrane of the vagina, rather than in those of a more dense structure like the uterus.

Another peculiarity of cancer of the uterus is, that it does not become encysted, as it not unfrequently does when seated in the internal organs, especially the liver. The reason of this appears clear. The cancerous deposit I have never found encysted, except it was at the same time in a fluid state; a condition evidently preparatory to its evacuation. In cases where this cannot easily be effected, nature by a happy provision noticed indeed in other cases of a different nature, but when the same principle is to be applied, separates or isolates the foreign deposit from the surrounding tissues by enclosing it in a cyst, in which condition it may probably remain for an unlimited time without disturbing the healthy functions of the organ. But, in the uterus, as we have already seen, a ready passage is offered to the softened cancerous deposit through the vagina, so that this second provision of nature becomes no longer necessary.

Another circumstance important to notice in this connection is, the great tendency of the cancerous deposit while passing into the fluid state to decomposition. The pure white and inodorous substance becomes of a gray or sometimes blackish colour, exceedingly offensive, and breaking down rapidly into a grumous detritus is discharged from the vagina. The frequency of this mode of termination renders it an important point in the diagnosis of the advanced stage of cancer. In examining such cases after death, I have noticed that the decomposed portion was always superficial and not separated from the portion beneath by any distinct line of demarcation.

Cancer of the uterus is not always simple. In many cases the same morbid deposit is found in other organs, more or less advanced in its progress. I regret that my observations on this point are less perfect than I could wish, circumstances frequently occurring to prevent me from making as complete an examination as the case might require. I have most frequently found the cancerous deposit in the following situations: in the tissues composing the vagina, bladder, and rectum, especially the former, leading to the production of vesico-vaginal and recto-vaginal fistula; in the uterine veins; in the lymphatic glands of the pelvis; in the cellular tissue beneath the peritoneum lining the pelvis; in the substance of the muscles in the pelvic cavity, and

in those of the thigh; in the liver; the lungs; the pleura; the bones of the cranium.

Besides this deposition of cancer in so many different tissues and organs, I have commonly found evidences of inflammation, which in this, as well as most other chronic diseases, is the immediate cause of death—evidences of recent inflammation of the lungs or of the mucous membrane of the intestines are most frequently found. In addition, I have generally met with evident signs of inflammation in the immediate neighbourhood of the cancerous deposit, when it has advanced to its last stage; in the vagina, the rectum, and bladder, indicated by redness, softening and thickening of the tissues, especially the mucous membrane, by vegetations and superficial ulcerations not cancerous in their nature.

I will now offer to your attention a few dissections of cancer of the uterus, which will, I think, illustrate its pathology more clearly than any general description can do.

The following may be regarded as a type case of the disease. The previous history is very imperfect: the patient was about thirty-eight years old and had been sick about seven months; she complained very little of pain; the most striking symptom in her case was hemorrhage from the uterus, which was very severe towards the close of her life.

All the organs were extremely pale. There was still a good deal of fat, especially about the pelvis; the uterus was twice its natural size without adhesions to the surrounding parts, and preserving nearly its natural form; the neck was transformed into a substance of a pure white colour, and so soft that the slightest scraping with the scalpel reduced it to a liquid resembling lime prepared for white-washing; the body of the organ was composed of a firm, white, homogeneous substance, without any trace of fibres, but presenting small red spots; the fundus appeared natural, except rather pale and firm. The progress of this disorganization was gradual without any distinct line of demarcation. There was noticed upon the cut surface, especially upon that portion of it which was most dense, and also in the cavity of the organ, the orifices of vessels both large and numerous. The lining membrane of the uterus still existed, but of a brownish red colour, very much softened and somewhat

thickened. The vagina, the bladder, the rectum, were healthy, as were the left ovary and fallopian tube. There was dropsy of the right ovary and tube, the fimbriated extremity of the latter being adherent and plunged into a mass of the cancerous deposit. The lymphatics extending along the great vessels of the pelvis were enlarged. The other organs were not examined.

The following is an example of the extent of the cancerous deposit in some instances:—

The disease was most advanced in the neck of the uterus and in the posterior portion of the vagina, where a communication existed between the vagina and the rectum. The cancerous deposit here presented externally an extremely irregular surface composed of soft, reddish or livid granulations, which, when cut, exposed a soft, dead-white, still granular surface, giving out, on pressure, a fluid resembling perfectly lime prepared for white-washing. The body and fundus of the organ still retained its natural appearance, except that it was slightly hypertrophied and more firm than natural. The cavity of the uterus was also enlarged and filled with pus of tolerable quality; its mucous membrane was livid and softened. A considerable quantity of the cancerous deposit was found between the vagina and bladder, and one of the large uterine veins was filled with it. The ovaries were smaller and firmer than natural; the liver was altered in its form, bosselated, and the seat of extensive cancerous deposits. These were all, or for the most part, in a fluid state extremely offensive and contained in firm white cysts divided by membranous partitions. The largest of these cysts was capable of containing at least half a pint of the fluid which resembled precisely in appearance that which had been previously pressed from the uterus; the surrounding substance of the liver appeared rather darker than natural, but was otherwise healthy. In the superior portion of the os frontis, a circular aperture, an inch in diameter, existed; its edges were rough, and when viewed from the inner surface of the bone, appeared covered with fungus granulations filling up the opening, and adhering to the dura mater which was not otherwise diseased. Professor Cruveilhier, by whom this dissection was made, regarded the disease as having its point of departure in the uterus, thinking that the cancerous deposit was taken up by the veins and deposited in

other organs, precisely as, according to this pathologist, pus is transported to remote organs in uterine phlebitis.

I will conclude this account of the morbid anatomy of cancer of the uterus, with the following singular case which I examined about a year since at the Bellevue Hospital. The patient was a negress, about fifty years old, who had been subject to hemorrhage from the vagina for six or seven years.

A tumour of considerable size, two or three inches in diameter, projected from the posterior and left lateral surface of the vagina, apparently developed in the submucous cellular tissue. About one half of the tumour was already destroyed; and the surface where this destruction was still going on was in a state of decomposition, presenting a dirty, grayish, irregular appearance. After cutting through the tumour, the decomposition was evidently confined to the surface, the portion beneath being formed by the cancerous deposit partially softened. That portion of the vagina below the tumour was inflamed; its posterior surface presented a large irregular ulcer with thickened edges and a grayish base, which appeared to be formed by a thin layer of partially softened cancerous matter. The uterus was found high up in the vagina, and was so completely altered in its form that it could only be recognised by its situation, and by its connection with the fallopian tubes. The body was elongated laterally without any determinate shape, and the neck was entirely wanting. There was, however, a mamillary projection into the vagina, which might originally have constituted this portion of the organ, which presented no traces of an os tincae, and was filled with particles resembling bone. There was another small tumour under the peritoneal coat, covering the fundus. After dividing the fundus, its natural texture appeared manifest, only more pale and dense, probably from the presence of the cancerous deposit. The lower lobe of the right lung was inflamed in the first and second degree.*

* Since this Essay was prepared for publication, I have made a *post mortem* examination of a case of cancer of the uterus, occurring in the practice of Dr. Vandervoort. The history of the case presenting nothing new, I shall not detail it. I would only remark that the patient was twenty-nine years old, and that the duration of the disease was about sixteen months. The *post mortem* appearances, however, presented some points different from what I had noticed in any previous case,—I will therefore detail them in full.

CAUSES. — In speaking of the causes of cancer of the uterus, I shall confine myself to one point, — to examining the evidence there is against the prevailing opinion that inflammation is the cause; an opinion advocated by Broussais, and, so far as I know, adopted by most of the leading pathologists among the French. My own observation has led me to an entirely different conclusion on this point. In the first place, if we examine the uterus during the early stage of the disease, as I have sometimes done when patients have died of some other disease, we notice no appearance of inflammation, or even of increased action. The organ is not increased in size; its substance appears commonly more pale than is natural; the peritoneal coat, the vagina, in direct contact with the diseased portion, appear perfectly heal-

Emaciation very marked, skin generally of a straw colour. On opening the cavity of the peritoneum, the surface of the intestines was found spotted with white masses, which, on examination, were found to be the cancerous deposit beneath the peritoneal coat; the same deposit also existed, more abundantly, between the folds of the mesentery. The uterus was quite fixed in its position, adhering to the sigmoid flexure of the colon, to the superior portion of the rectum, and to the posterior surface of the bladder. After separating these adhesions and removing the organ, it was found about three times its usual size, still preserving nearly its natural shape. After dividing the organ from the fundus downwards, it was ascertained that *its cavity was obliterated*, that the neck was destroyed and blended with the diseased vagina in an uniform mass; and that the whole muscular substance of the body and fundus had degenerated into the cancerous deposit, softened in some portions. The vagina was the seat of great destruction from the softening and decomposition of the cancerous deposit found under the mucous membrane. The right ovary was adherent to the fundus, presenting a shrivelled appearance, containing small masses of the cancerous deposit. The left ovary was also adherent to the body of the uterus, near the neck, also shrivelled, but containing no masses of cancer. The fallopian tubes were rather large and congested. The subperitoneal cellular tissue investing the bladder, rectum, and pelvic cavity, was much loaded with the cancerous deposit. The bladder was contracted; its mucous membrane healthy; the mucous membrane of the rectum was somewhat softened. The liver was somewhat larger than natural; the right lobe contained a large mass of the cancerous deposit, and several smaller ones in the first stage of the disease; these were not encysted; but a small portion that had softened, was beginning to be enclosed by a cyst; the portions of the liver surrounding these deposits were perfectly healthy. *The ureters and pelvis of both kidneys were much dilated*, caused apparently by the obstruction to the passage of the urine from the deposit of cancer into the cellular tissue about the bladder. The substance of the kidneys was more pale than natural.

No symptoms of any obstruction to the free passage of the urine into the bladder, existed during life. Dr. A. C. Post has informed me that he has met with a similar case of dilatation of the ureters in cancer of the uterus.

thy. It is true, that in the progress of the disease, when the cancerous matter has become softened, we do find evidences of inflammation, especially in the vagina, produced evidently, as I suppose, by the passage of an irritating matter over its surface, just as we find inflammation of the bronchi communicating with a tuberculous abscess, equally the result of a secondary irritation. In the second place, the circumstances under which cancer of the uterus commences its course, are not such as would lead us to suspect the existence of a previous inflammation as its cause. We might indeed suppose, if this was the constant or even frequent cause of cancer, that prostitutes, especially those of the common class who fall into the hands of our dispensary physicians, would at least, occasionally, become the victims of it; but this, by the concurrent testimony of all, is not the case. I have never yet met with a case in a public prostitute. I have also examined, with great care, every patient that has fallen under my observation, with reference to any evidence of pre-existing uterine irritation, such as long-continued leucorrhœa, dysmenorrhœa, and in such as had had children, (by the way, hardly without an exception) as to whether they had miscarried during pregnancy, whether they had suffered from difficult or preternatural labours, or had been delivered by instruments, and never could find any conclusive evidence, from this study, of the constant or even frequent existence of previous uterine irritation. Again, there is another circumstance that militates very strongly against the idea of the inflammatory origin of cancer of the uterus, and that is the age of the patients that are most frequently found affected with it. It is an indisputable fact that a large proportion of these have passed the *turn* of life, when the active functions of the uterus have ceased, and when it is tending constantly to a state of atrophy from mere inaction. M. Tanchou has published in the *Journal des Connaissances Medicales* for November, 1836, some extended statistics on the fatal diseases of the female sexual organs, founded upon 2568 cases; from which it would appear that from the age of twenty to thirty years, undoubtedly the period when inflammatory diseases of the uterus would be most likely to prevail, only one in five died of cancer; while from fifty to sixty years, the proportion was precisely reversed, five to one dying of this disease. If, then, the idea of

the inflammatory origin of cancer of the uterus gains no support from the study of its early pathological history, nor from the circumstances under which it is developed, I fear we must rest satisfied with complete ignorance as to its real causes. Much foolish speculation has been published upon this as well as upon other points connected with the pathological conditions of the different organs, which, resting entirely on conjecture, gains no credit from those who demand facts on which to rest their belief.

There is one other point connected with the causes of cancer of the uterus which would be well worth examining, but to which I regret I have not had the means of paying sufficient attention; and that is, the hereditary predisposition to the disease. It is highly probable that the disease is frequently transmitted in families. Much care and observation would be necessary to establish the just value of a point like this, better opportunities, indeed, than fall to the lot of young practitioners.

HISTORY. — Let us now pass to the study of the history of the disease during life. This part of our subject can, I think, be best illustrated by cases.

April 28, 1836. A cook, of a good constitution and ordinarily in the enjoyment of good health, with the exception of an attack of the cholera in 1832, was accustomed to a laborious life in a low, damp kitchen, although to sleep constantly in the upper story of the house. She began to menstruate at the age of nineteen years. During the early part of her life, until the age of thirty years, the menses were too abundant, returning every fortnight, and continuing frequently eight days. After this period, they became less abundant; and, finally, ceased naturally at the age of forty-five. She had had two children, the last in 1814. Her labours were always easy and natural; she had never miscarried. Immediately after the cessation of the menses, she began to be affected with a leucorrhœal discharge, which gradually increased in quantity, assuming a reddish tinge. About six months ago, without evident cause, she became affected with severe uterine hemorrhage, which continued only one day. This was preceded, for a week, by pains resembling those of colic, in the lower part of the abdomen, pain in the loins, the groins, and the thighs. These hemorrhages have continued to

return about once every month, followed, during the interval, by the thin, reddish discharge. The last hemorrhage which occurred about six weeks ago, was more abundant than before, and accompanied by more pain, especially by darting pains in the pelvis and thighs. About a week after this, she began to pass her urine involuntarily, having previously suffered no pain in performing this function ; and, at the same time, to experience some embarrassment, with a little pain, in going to stool, her bowels becoming constipated, while before they were sufficiently free.

This was her *actual condition* on the 26th April, six months after the first hemorrhage.

She was considerably emaciated and feeble, with a morbid-faced complexion, without the slightest shade of the straw colour.

The senses, the intellect, &c., unimpaired. Her appetite was good ; her digestion easy ; her tongue slightly œdematous and covered with a thin white coat, but moist. There was no disposition to nausea or vomiting.

There was neither cough nor palpitation of the heart.

She suffered from pain about the upper portion of the sacrum, and in the pelvis, which was sometimes excruciating, — from a sensation of drawing and pricking in the groins, extending down and across the thighs, in the direction of the sartorius muscle, to the knees. These pains occurring in paroxysms, always commenced in the pelvis affecting the thighs consecutively ; they always abated together. There were intervals when she did not suffer at all, except from a sensation of weakness or heat in the pelvis, especially when she passed her urine. Pressure in the hypogastric region produced very little pain, and discovered no distinct tumour, but there was an evident feeling of fulness and resistance extending to the groins. There was a complete absence of febrile symptoms.

She remained nearly in this condition until the 9th of September, about ten months after the first hemorrhage, when she died, from the gradual progress of the disease. Her intellect remaining unimpaired, and suffering very little from pain, being chiefly annoyed by the discharge from the vagina, which had become very offensive. One fact in particular was noticed, that although the urine was passed involuntarily until the close of life, yet, after a time, it ceased to be attended with any pain.

Post mortem Examination. The neck of the uterus was entirely destroyed; the body was reduced to a blackish detritus hanging on shreds; the fundus was more firm and pale than natural, but not disorganized, and of the natural size. The vagina and bladder communicated with each other by a large opening two inches in diameter, the edges of which were hanging in shreds. The mucous coat of the vagina was covered by a thick false membrane, the probable cause of the cessation of the pain in passing water during the latter period of life. The mucous membrane of the rectum was, in portions, red and softened, and the submucous cellular tissue much thickened. The lower lobe of the left lung presented the second stage of inflammation. A few chalky tubercles were found at the summit of the right lung; no other lesion was discovered.

The above case appears to me to present a correct history of simple cancer of the uterus, at least, in most of its particulars. Let us now examine the prominent symptoms of the case, and by comparing them with what is noticed in other cases, endeavour to appreciate their just value in the diagnosis. The patient, you will recollect, was a woman of a healthy constitution, and, although subject to profuse menstruation until thirty years of age; yet, after that period, this disorder had ceased, and had not prevented her having healthy children, and passing the turn of life in the most natural manner. The first suspicious symptom which occurred, was a leucorrhœal discharge, which gradually assumed a reddish tinge;—this is a fact well worth noticing. I remember hearing M. Louis remark, in relation to a similar case, that the occurrence of leucorrhœa, after the final cessation of the menses, was always, however trifling it might be, to be regarded with great anxiety, being commonly the first symptom in the developement of some organic disease of the uterus, not necessarily of cancer, but also of uterine polypi and of fibrous tumours. This discharge is not to be regarded as connected with the cause of the cancerous or other organic change dependent upon pre-existing uterine irritation; but, like the bronchial affection in the early stage of phthisis, it is the *consequence* of the morbid deposit. Another peculiarity attending this discharge, was its sanious appearance even early in the disease, gradually becoming extremely fetid, thus affording a very common and

valuable indication of the disease after decomposition has commenced in the superficial portion of the cancerous deposit. It also not unfrequently happens, although it was not noticed in this case, perhaps from want of attention, that portions of the partially softened cancerous deposit are found in the discharge from the vagina, or as a deposit in the urine, in cases where vesicovaginal fistula exists, precisely as we find the softened tuberculous matter mixed with the secretions of the bronchi in phthisis.

Again, we notice in this case, the occurrence of uterine hemorrhage, preceded for a week by signs of severe local irritation. Uterine hemorrhage is by far the most important of the rational signs of cancer, for it is seldom absent. Like the hemorrhage from the lungs in phthisis, it is frequently the first symptom that awakens the fears of the patient by its suddenness and violence, while, in other cases, returning with less violence, and at regular intervals, it is mistaken for the menstrual discharge, even by those who have already passed the *turn* of life. The constancy of this symptom may be argued from the fact, that it was present in every case I have observed with sufficient accuracy to render the history of any value, and in one half of these, at least, it was the first symptom that attracted attention; in the remainder it was preceded by a leucorrhœal or sero-sanguinolent discharge. I remember hearing M. Louis remark that in nineteen of twenty-two cases of cancer of the uterus that had been observed by him, hemorrhage had occurred at the commencement, and usually under a severe form. The importance of uterine hemorrhage as a symptom of cancer being established, we must guard against the grave mistake of trusting to it as a diagnostic sign independent of other symptoms,—for it is a symptom also, of other organic diseases of the uterus, especially of polypi, growing from the cavity of the organ; of fibrous tumour developed in its substance, and of that peculiar form of chronic inflammation of the neck of the uterus attended by softening and enlargement of the part affected, several cases of which I read at a meeting of the Society last year.*

The character of the pain in this case, is another point worthy of notice. Pain commencing in the upper portion of the sacrum, and in the pelvis, sometimes excruciating, followed by a sensa-

* An Essay on Congestive Induration, and Congestive Softening of the Uterus.

tion of drawing and pricking in the thighs, aggravated by an increase of the pain in the parts originally affected, and, at times, ceasing entirely with it. It is not very easy to explain in a satisfactory manner, the cause of these painful sensations, at least, of those that occur in the thighs. As they are frequently accompanied by a sensation of numbness, as they occur in the direction of the branches of the anterior curval nerve, it might be supposed that they might all be the result of pressure on the plexus that gives origin to this nerve; but I am satisfied, from sufficient dissection, with a view to this point, that the uterus in cancer, seldom, or never, attains a sufficient size to effect this. The mode in which the pain commenced and was propagated in the case related above, renders it sufficiently probable that it is the simple effect of irritation. The diagnostic value of these pains may be estimated by the fact, that they occurred in every case, the history of which is perfect, and in a large proportion of these, it was of a darting kind at intervals—a kind of pain supposed to be diagnostic of cancer. Finally, we notice in the above case, the freedom from febrile symptoms during the whole progress of the disease, and its termination by the gradual exhaustion of the vital powers, hastened by the occurrence of a latent pneumonia.

The following case presents the disease under a more aggravated form than that already detailed.

A market-woman, aged thirty-nine years, of good constitution, had never been married, but had lived ten years as a mistress without having had children or abortions, although always regular in her menstrual function, and free from leucorrhœa before the commencement of the present disease. During the month of November, eighteen months ago, after having passed the whole day in the open air, with her hands almost constantly in cold water, and during the interval of the menstrual periods, she became affected with a sero-sanguinolent discharge from the vagina, which continued fifty days. This discharge was occasionally attended with small clots of blood, and accompanied by pain in the sacrum, the pelvis, and soon after, in the thighs. Two months after the cessation of her first hemorrhage, she experienced a second attack, of the same general character, and so on, to the number of ten or twelve, which varied in their duration from two to ten days, with a colourless serous discharge

during the intervals. She has experienced also a sensation of *drawing* in the thighs; of pain and weight in the fundament; pain also in passing urine; and has discovered in her stools a glairy matter, and perhaps blood; she has been obliged to quit her occupation for a year.

I found some difficulty in obtaining a very accurate account of her *actual condition* because of her intense suffering; her countenance was expressive of the pain she was enduring; it exhibited no appearance of the pale straw colour supposed by some observers to be diagnostic of cancer.

Not much emaciation; intellect perfectly clear; excruciating pain in the sacrum, the pelvis, the groin, and the thighs; no pain in the fundament, but some in passing urine. The lower portion of the abdomen was distended, as in the fifth month of pregnancy, and extremely sensitive to pressure; leucorrhœa, vomiting, fever.

This patient died in about ten days, without any relief from her excruciating suffering.

Post mortem Examination. We found the uterus between two and three times its natural size; preserving perfectly its shape, smooth and regular upon its external surfaces, and nearly or quite degenerated into schirrus which had hardly begun to soften. A large deposit of schirrus had taken place in the cellular tissue about the uterus, the bladder, and the rectum, in the substance of the psoas muscles, and in those of the thighs.

This case presents the most severe instance of the disease I have ever witnessed. The patient died not from gradual exhaustion, as in common, but from the unremitting severity of her symptoms, at a period when her strength and general appearance, a short time before, had indicated a much more prolonged existence. The great tenderness of the abdomen on pressure, the vomiting, the fever, had led to the supposition that acute peritonitis had supervened; but on examination after death, no traces of it could be discovered.

A market-woman, aged sixty-one years, of good constitution, and without family predisposition to disease of the uterus, was married and delivered of her first child at the age of sixteen years. She has since had fourteen children; three of her labours were preternatural; the last, at the age of thirty-eight years, requiring the introduction of the hand. She ceased to menstruate when forty-two years old.

Four years ago, being then fifty-seven years old, she began to notice slight hemorrhages from the vagina, which she mistook for a return of the menses, and which appeared six times in the course of a year; after which time she had a severe attack of hemorrhage, accompanied by a sense of painful weakness and of weight in the pelvis; she became constipated, had chills and fever, and lost flesh and strength. For six months, however, she had no return of the hemorrhage, but at the end of that period she began to discharge from the vagina a thick, brownish-red fluid, which has continued until the present time, that is between two and three years; still, without return of the hemorrhage. The pain in the pelvis has increased and now extends down the outside of the legs to the feet. For two months the discharge of urine has been involuntary; for four months previous, its passage had been attended by bearing down pains, and it could be more easily passed in bed than while sitting.

ACTUAL CONDITION.—Intellect perfect, expression of countenance tranquil, slightly straw-coloured. The patient is perfectly aware of the necessarily fatal termination of her disease. Emaciation and loss of strength, sleep disturbed.

Tongue cracked and covered with a thin white coat, appetite and digestion natural. Abdomen full and generally sensitive to pressure, especially in the hypogastric region, which is, indeed, too sensitive to permit the search for a tumour. Constant pain in the pelvis, which is occasionally of a darting kind. The urine deposits a dirty white, demi-transparent gelatinous substance, which forms an uniform thin layer, adhering closely to the bottom of the vessel. The superior and anterior portion of the vagina presents an ulcer (through the speculum,) an inch in diameter, with hard, elevated, irregular edges, painful to the touch; the seat, undoubtedly, of the vesico-vaginal fistula. The body of the uterus is inclined forward; the neck is softened, and pul-taceous; an offensive odour is communicated to the finger when withdrawn; pulse eighty, calm; no fever.

This case remained under my observation about a month, constantly growing worse, when I ceased to see it. No doubt can be entertained of its nature. The general history of the case, the vesico-vaginal fistula, the softened cancerous deposit

noticed in the urine, the examination by the speculum and the touch established the diagnosis.

The hemorrhage in this case was different from what is frequently noticed, inasmuch as it was trifling at the onset, exciting no alarm and returning at intervals, was mistaken for a return of the menses, until, after the lapse of a year, one severe attack of hemorrhage occurred, after which it ceased.

We observed, also, in this case, and for the first time, a peculiar tinge of the skin, *a pale straw colour*. I speak particularly of this circumstance, which to some may appear of trifling importance, because an eminent observer, I refer to M. Louis, is disposed to regard it as a diagnostic sign of cancer. My own observation has led me to *this* conclusion. In many cases of cancer, this peculiar colour of the skin is very marked; in other cases, and certainly in a considerable proportion of the whole number, it is entirely absent. Again, in cases of uterine disease entirely distinct from cancer, it exists, sometimes, in a very marked degree, as I have noticed particularly in two cases of fibrous tumour of the uterus, in which cases it was probably dependent upon repeated hemorrhage from that organ. So that, finally, so far as I have been able to form an opinion, it possesses no great value in the diagnosis of cancer.

DIAGNOSIS.—We have then in cancer of the uterus, a disease chronic in its duration, developed under the influence of causes entirely unknown, affecting, in a majority of instances, those who have passed the middle period of life. At one time, commencing with symptoms of slight uterine irritation; at other times, sudden and violent in its onset, accompanied by pain in the sacrum, pelvis, groins, and lower extremities, remittent in its character, commonly dull and burning, or marked by a sensation of weight or pressure—sometimes severe and lancinating. Early and commonly severe, or trifling and protracted hemorrhage from the uterus, sometimes preceded, sometimes followed by a leucorrhœal discharge, gradually assuming a sanious and fetid character. In many cases, in the advanced stage, incontinence of urine and fœces,—gradual emaciation and loss of strength, without febrile excitement; and, finally, death from exhaustion, hastened, often, by the supervention of a low or latent inflammation, especially of the lungs and intestines. And

as the cause of these symptoms, we find the uterus and the tissues in its neighbourhood, more or less completely disorganized and destroyed.

With this history of a formidable and fatal disease before him, the practitioner might indeed suspect the perilous condition of his patient even while yet far removed from immediate danger. But it appears to me a fact of great importance that many of the organic diseases of the uterus, some of which are free from danger, *qr.* at least, curable if proper remedies be used, resemble each other so nearly in their rational signs, as to leave great uncertainty in their diagnosis, if these alone are relied upon. This remark is not only applicable to the early stages of their progress, but, also, to a certain extent, to their more advanced development. In proof of this I may mention, that within my own experience, two cases of cancer of the uterus, both of which terminated fatally within two months afterwards, were falsely regarded as trifling affections which excite no alarm, and hardly interfere with the enjoyment of health; being in one case called leucorrhœa, in the other prolapsus uteri. There appears to be, in truth, but one way of arriving at safe conclusions in these cases, and that is by an early and careful study of the *physical signs* of uterine disease, by means of the *touch* and the *speculum*.

If we examine the uterus during the early stage of cancer by the touch, we find the neck of the organ, which is the principal seat of disease, but slightly, or not at all, increased in size, hardly sensible to pressure, but very firm and resistant. In many cases, the portion surrounding the os tincæ is irregular or bosselated. In other cases where the body is enlarged, the uterus has lost its natural mobility, or has even become fixed in a situation rather low down in the vagina. Examined by the speculum, the neck appears much paler than the surrounding parts; sometimes, when the cancerous transformation is complete, of a dead-white colour. It is this change in colour, accompanied by an unnatural firmness and insensibility to the touch, that constitute the leading indications in the early diagnosis of cancer of the uterus. The bosselated condition about the os tincæ is a less important indication, being, as I think, not peculiar to, although more marked in this disease. I mention this more particularly because this condition is commonly

thought to be of more importance than it really deserves. I remember that several years ago, a distinguished practitioner of this city, whose opinion was requested by a patient of mine, made it a principal point in his diagnosis, and in that particular case he was right. But I am satisfied that in other cases it might have led to a wrong opinion, inasmuch, as sufficient dissection has convinced me, that the cancerous deposit is infiltrated in an uniform manner into the tissue of the organ, and that this bosselated condition exists, although in a less marked degree, about the mouth of every uterus that has borne many children. Indeed, every one knows that the parts about the os tincæ are more or less lacerated during labour, and that the cicatrices which form afterwards, are marked by distinct depressions, giving to the part an irregular feel, which, when infiltration has taken place from some foreign deposit, or even when simple hypertrophy of the tissues occurs, becomes more marked and sensible.

In the advanced stage of the cancerous deposit, it is commonly sufficient to trust to the touch in the physical diagnosis. The finger passed up to the uterus finds the neck partially or even totally destroyed, it penetrates readily into the cavity of the organ, and is plunged into a pultaceous mass without form, being bathed, when withdrawn, with a sanious fluid mixed, perhaps, with small portions of the softened cancerous deposit, and revealing the fetid odour that is peculiar to this stage of the disease. It is more safe, also, in such cases, to abstain from the use of the speculum, when the infiltration of the cancerous deposit into the surrounding tissues has probably laid the foundation of fistulous openings into the bladder or rectum, so that the vagina might easily be lacerated, or when, by irritating the uterus itself, severe hemorrhage might be induced. Still, in cases involved in any doubt, it ought certainly to be introduced, but with great care.

It will hardly be possible, I think, to confound the early stage of cancer of the uterus with those chronic inflammatory diseases of the organ described in my former essay. These latter diseases are simply local inflammations, occurring commonly early in life, during the period of the greatest activity of the sexual organs, and marked by the usual signs of this morbid condition,

viz. increased heat, redness, sensibility, and developement of the organ, especially of the neck, accompanied by a purulent discharge from the os tincæ, indications of disease entirely distinct from those of cancer, which in its early stage presents no signs of inflammation.

There are two other forms of organic disease of the uterus which may be much more readily confounded with cancer, inasmuch as they commonly occur at the same period of life, and are accompanied by rational symptoms somewhat analogous, especially by severe and repeated hemorrhage leading to the gradual exhaustion of the vital powers. These are uterine polypi and fibrous tumours developed in the substance or cavity of the organ; forms of disease usually described as distinct, yet, for all practical purposes, more properly united. I hope, on some future occasion, to offer to the attention of the Society, some observations on this form of disease, which is much more rarely met with than cancer, and shall therefore limit myself now to a general remark on the diagnosis. The principal point to remember is this; that tumours developed in the substance or the cavity of the uterus, impose upon it the same conditions observed in pregnancy. The organ becomes greatly hypertrophied, the neck becomes shorter and softer, the os tincæ opens so as to admit the extremity of the finger, yet continues perfectly free from all signs of disorganization—circumstances all remote from those we notice in cancer.

But we can often go beyond this in ascertaining the pathological condition of the organ; the finger, introduced into the cavity of the uterus, may discover the tumour, which becomes more and more easily recognised from its tendency to be expelled into the vagina. An examination, *per rectum*, will, also, sometimes greatly aid us when the tumour is situated in the posterior portion of the substance of the uterus. It should be remembered also, that dissection has established the fact that in cancer the uterus is not very much increased in size, seldom attaining to more than two or three times its natural dimensions, entirely contrary to what is frequently noticed in the case of fibrous tumours, where the uterus acquires a great developement. The second case related in this essay, where a tumour equal to the uterus at the fifth month of pregnancy, was discovered in

the hypogastric region, might appear as an exception to this statement. Yet, on examination after death, the uterus was found but twice its natural size, the tumour being formed principally, by the infiltration of the cancerous deposit into the tissues of the pelvis.

TREATMENT. A great variety of internal remedies have been recommended in the treatment of cancer of the uterus, all of which, after enjoying a certain celebrity, have fallen into the disuse they merit. No one acquainted with the true pathology of the disease, can expect to cure it by such means. It is indeed doubtful, how far any means we can employ can retard its progress towards a fatal termination. This complete failure has led to the adoption of a surgical treatment, to remove by an operation the parts affected; but this method, like every other, after enjoying a temporary reputation, has been generally abandoned. The amputation of the neck of the uterus in cancer, was first brought to the notice of the profession by Osiander, a German surgeon, about the commencement of the present century. Dupuytren, who was at that time just commencing his great reputation, eagerly seized upon the idea and performed the operation in numerous instances, until, after a full trial, he abandoned it as entirely useless. Lisfranc, who adopted it at a later period, has given to the profession the results of his experience, which, could they be relied upon, would establish beyond a doubt, the great importance of the operation. This surgeon, a candidate for the place in the Academy of Sciences, left vacant by the death of Dupuytren, addressed to this body a memoir on the amputation of the neck of the uterus, which concludes in this manner: "I ought not to terminate this memoir without announcing to the Academy that, of ninety-nine women on whom I performed this operation, eighty-four were cured."* But unfortunately this great success has been contradicted, and, that too, by an individual who certainly possessed the means of arriving at the truth, having been for three years the principal prosecutor to M. Lisfranc, and assisting him in his operations

* *Memoir sur l'Amputation du col de l'Uterus, par M. Lisfranc, lu à l'Academie des Sciences, 2 Juin, 1834.*

during that period. "I have never, says M. Pauly,* seen the amputation of the neck of the uterus successful when there was cancer," and then he goes on with the history of fourteen cases in which he assisted M. Lisfranc. In support of this side of the question, I may adduce the practice of the other Parisian surgeons, who appear, without hardly an exception, to have abandoned the operation.

Again, others who have adopted the same principle, but another method, have recommended the destruction of the diseased portion of the organ by cauterization. There is in the work of Mme. Boivin and Professor Dugés, a remarkable case of cancer treated in this way — remarkable for the great destruction of the organ without dangerous consequences, and equally so, for the courage and constancy displayed by the patient in submitting to so severe and long continued a treatment, she having been cauterized twenty-eight times during eight months. The patient, it is stated, *nearly* recovered. No one, I think, who had read attentively the case, would dare incur the risk of a fatal peritonitis, or expect to find a patient so strongly attached to life as to submit to the issue, on the supposition even, that the chances of cure were considerable. But long before I had read the refutation of M. Lisfranc's success by M. Pauly, I was strongly inclined to the belief that nothing of this kind, the removal of the neck of the uterus by the knife or the cautery, could succeed; because, in mild cases even, the body of the organ had begun to present signs of the cancerous deposit, a fact revealed by dissection; and because, the disease, so far as its early history could confirm the fact, appeared entirely independent of any local cause. Thus, the removal of it in one part, would soon be followed by its development in another portion of the uterus, or in some new organ.

Indeed, nothing can be more clear, I think, than the course to be pursued in the treatment of these unfortunate cases. As soon as the disease is fully recognised, our only indication is to moderate the suffering from a disease, perhaps, the most excruciatingly painful and disgusting, to which the female sex can be exposed.

* *Maladies de l'Uterus d'apres les Leçons Cliniques de M. Lisfranc, par H. Pauly. Paris, 1836.*

The paroxysms of pain, the tendency to hemorrhage can frequently be checked by keeping the patient in a recumbent position. Emollient injections into the vagina, repeated frequently, will aid in producing the same effect. In the last stage of the disease, when the discharge from the vagina has become fetid, we shall gain the patient much comfort by the use of detergent injections of soap and warm water, followed by a weak solution of the chloride of soda. Care should be taken in every case where injections into the vagina are used, first, that the hips be so raised that the plane of the vagina should incline downwards, and backwards; secondly, that the end of the syringe pipe should not come rudely in contact with the diseased organ; and, finally, that the injection should be thrown in with great slowness. In addition to these means of relieving irritation, nothing is so well calculated to relieve a violent paroxysm of pain, as an opiate injection into the rectum, a mode of administering opium which is much more efficacious, in such cases, than when taken by the mouth. Besides, it does not disorder the stomach, an accident extremely apt to occur in the progress of this disease. This tendency to gastric derangement, though not peculiar to cancer, is yet frequently a symptom requiring attention, inasmuch as when nausea and vomiting become once fairly established, they are checked with difficulty, and add much to the distress of the patient. A mild, farinaceous diet, carefully regulated, will check this tendency. Finally, the low inflammatory complications that accompany the close of the disease, being frequently latent, escape the knowledge of the physician until dissection reveals their existence.

ART. V. *Observations on Morbus Coxarius*. By JOHN G. ADAMS, M. D. (Read before the N. Y. Medical and Surgical Society, January 27, 1838.)

DISEASES of the joints, considered as a distinct branch of pathology, have not, until within a comparatively recent period, received that share of attention, which their frequent occurrence, and serious character demanded. The cause of this neglect is to be found in the vague opinions which formerly prevailed respecting this class of diseases, the older surgeons applying the same terms, without discrimination, to affections which are now known to be entirely different in their character; and the sweeping denominations of white swelling, and serofulous joints, comprised nearly all the morbid changes to which the joints are liable. Modern pathology has thrown great light on this important subject; it has been the basis of a more scientific classification and of accurate diagnosis; and although it is to be regretted, that the extension of our pathological knowledge, is not always followed by an improved system of therapeutics, yet in this class of diseases, our treatment is more philosophical, and certainly, more successful, than that of our predecessors. The labours of De Haen, Petit, Ford and Crowther, Brodie, Scott, and Buchanan, and of our fellow-countryman, the late Dr. Physick, have, by improved modes of treatment, and the prevention of unnecessary suffering, conferred a lasting benefit on mankind. And, although some of these diseases proceed to a fatal termination, in spite of every means employed, yet, the majority are capable of being relieved or completely cured.

The *anatomy* of the joints is simple and well understood: enclosed in a common capsule, we find bones, cartilages, ligaments, synovial membrane, and synovial glands, parts distinct from each other, in structure, functions, and the diseases to which they are liable. Sir Benjamin Brodie, whose attention has long been directed to the study of these diseases, was the first to establish correct principles of diagnosis; and his patient

investigations of these lesions in every stage of their progress, have rendered his treatise of the highest authority on this subject.

His labours have demonstrated, that disease generally commences in, and is at first confined to, one of the structures composing the joint: it may affect this structure only, without involving other parts, as in simple inflammation of the synovial membrane, or it may extend itself, and involve all the constituent parts of the joint, as in ulceration of the cartilages or caries of the bones. Inflammation of the synovial membrane appears to be the most common form of disease; Mr. Brodie never found the ligaments, with the exception of the capsular, *primarily* affected. The joints of the elbow, knee, and ankle, are from their superficial situation, most liable to suffer from accidents, exposure to cold, &c., while those more deeply seated, as the shoulder and hip, are liable to ulceration of the cartilages, or affections of the bones.

My esteemed friend and preceptor, Dr. Alex. H. Stevens, in a clinical lecture on the pathology of diseased joints, remarked: that a diseased joint was found in one of four different conditions; 1st, either in a state of *inflammation*, simple or specific; or, 2dly, in a state of *stiffness*, the result of previous inflammation, or accompanied with it; or, 3dly, in a *neuralgic condition*, with or without inflammation, and the diagnosis of which state is, that the pain is in paroxysms and very severe, depending on the state of the mind, or that of the digestive organs; or, 4thly, where there is some *organic change* in the state of the joint as in luxation, caries, &c. According to Scott, a late writer, disease of the synovial membrane is most common in middle life, as is also ulceration of the cartilages: disease of the cancellated extremities of the bones, most common in children. From among these various forms of disease, I have selected that affecting the hip joint, and commonly denominated morbus coxarius, as the subject of the present essay. It presents many interesting points for our consideration; the joint is of large size, and, from its situation, if the ordinary means for arresting the disease are unsuccessful, we must rely on the natural vigour of the constitution to sustain the patient through the painful and tedious process of suppuration. In disease of the knee, and other arti-

culations, we may amputate the member, and so get rid of the evil; in the hip this resource is beyond our power.

A number of cases of this disease have come under my observation within a few years; my attention was first directed to its study from having witnessed its ravages in the person of a near relative, who fell a victim, after ten years of suffering. I do not pretend to offer any thing on this subject that will charm by its novelty, yet hope, by giving the results of some experience and observation, not to occupy your time, altogether, without advantage.

This disease was known to the ancients; Hippocrates speaks of it in his Aphorisms, and recommends the treatment by counter irritation; it is also noticed by Celsus, Bærhaave, and most of the old writers.

It occurs at all *ages*, and spares neither sex nor condition in life; it is most frequently met with in children, from infancy up to fourteen years of age; of sixty-eight subjects of this disease, Mr. Brodie found that fifty-six were under the age of thirty; the youngest being an infant of about twelve months, the oldest, a woman of sixty.

Of the cases which I have observed, the eldest was of the age of twenty-two years, and from six to twelve years I have found to be the average period. The children of the poor do not seem more liable to this disease than those of the higher classes; this is contrary to what we should expect, as the disease is regarded by many writers as purely scrofulous, and we know the tendency of the habits and mode of life of the poorer classes to produce or develope this diathesis.

With regard to the *sex*, it would appear to be much more frequently met with in males than in females; where the disease originates from accidents, as falls or blows, males, are by far the most exposed, especially in the early periods of life. Of fifty cases which I have seen or had account of, forty-one were boys, and only nine girls; it is but fair to state, however, that many of my cases have been inmates of the hospital, where the proportion of female patients admitted, is very small. I do not find that any author alludes to this point.

The left hip appears to be more frequently diseased than the right. Of twenty-three cases recorded, fourteen were on the left

side, nine on the right. Authors are silent as regards this point also.

SYMPTOMS.—The early symptoms are of an extremely insidious character, the disease generally existing some time before the patient perceives any deviation from a healthy state of the part. So frequently is this the case, that patients often show great disposition to exercise and walk about for months, and in some cases, for years, after the disease is formed. It not unfrequently happens that the surgeon is not consulted until that aggravation of all the symptoms occurs, which characterizes commencing suppuration.

The earliest symptom is a slight weakness of the limb, by which the patient is prevented from bearing all his weight upon it, and a slight limping is the consequence. This is frequently attributed by parents, to indolence or an awkward habit, and is not considered of sufficient importance to require the advice of a physician. The joint will be stiff in the morning, on getting out of bed, or after sitting still for some time ; but becomes supple as it is exercised. This is accounted for by the friction of the head of the bone against the soft lymph that is deposited in the cavity of the joint during a state of rest, causing it to be partially absorbed. The stiffness returns towards evening, when the patients are always languid and fatigued. If the affected limb be examined at this early period, it will be found diminished in circumference, particularly the thigh and calf of the leg: this is undoubtedly owing to the same cause, which, at a later period, produces flattening of the nates, viz. want of exercise of the muscles, from the patient throwing most of his weight on the sound limb. If we observe the patient as he ascends a staircase, he will not advance one foot before the other alternately, in the usual manner, but will ascend by the well limb, lifting the other up to the same level. Examine the patient as he stands up before you, and you will notice that he does not stand square on both feet, nor will he, when required, stamp on the ground with the foot of the diseased side. The thigh and leg will be thrown out a little in advance of the other limb, and sometimes, even at this early period, the patient will stand with his toes touching the ground and his heel raised.

PAIN is a symptom appearing very early, frequently at the

same time with the weakness of the limb, and is always a prominent symptom. It is at first slight, and occurs in paroxysms at longer or shorter intervals, resembling the pain of rheumatism, and like it, shifts from place to place. The pain in the *knee* is most commonly complained of, and according to my observation, at the inner condyle of the femur; is most severe at night when the patient becomes warm in bed, in this respect also, resembling the pain of rheumatism; the sleep is disturbed by painful twitchings of the affected member. There will be also pain at the seat of disease in the hip, but it is not generally so violent or constant as that in the knee, which sometimes continues through the whole course of the disease. The ankle is occasionally the seat of pain, rarely however, in comparison with the knee and hip. Not unfrequently the pain alternates, leaving one joint and attacking the other; patients rarely complain of both at the same time. Pain in the hip is aggravated by motion, while the knee may be freely handled and turned in every direction without causing uneasiness. There is always some tenderness about the hip, particularly if pressure be made at its most superficial parts, as the groin, or behind the trochanter major. Direct pressure on the trochanter from without inwards, always increases pain, by bringing the diseased surfaces forcibly in contact. If, when the patient is lying in bed, a slight blow be struck on the sole of the foot, the patient will flinch and complain of pain.

ENLARGEMENT OF THE LYMPHATIC GLANDS of the groin is common at this period, owing to the irritation communicated from the seat of disease to the absorbent vessels. This is not, however, a constant symptom. An *alteration in the length of the limb* is a symptom characteristic of this stage of the disease; the limb appears lengthened, sometimes to the extent of two inches. When the patient stands erect, the knees are farther separated than natural, which gives him, when walking, a straddling gait. It is a matter of dispute among writers, whether the elongation be apparent or real. Mr. John Bell in his notice of this disease, attributes the lengthening of the limb to a swelling of the head of the femur, with a thickening of the periosteum and articular cartilages of both femur and acetabulum. It would seem that it is only in this way, that we can account for an actual lengthening of the limb; for the occurrence of suppura-

tion within the acetabulum, or of depositions of coagulable lymph, would rather favour the shortening. Mr. Brodie considers the elongation as only apparent, and owing to a distortion of the pelvis by which the ilium of the affected side becomes lower than the other. This is caused by the habit the patient acquires of bearing his weight on the sound limb, by which it is kept in a state of forced extension; as before observed, when standing erect, the diseased limb is thrown forward, the knee more or less bent, and the patient resting with his toes on the ground, preserves his equilibrium. This position causes the os innominatum of the affected side to be lower than the other, and necessarily produces a lateral distortion of the spine in the opposite direction. In order that the head may be preserved in the median line of the body, two other curvatures are induced, so that the spine, viewed posteriorly, resembles in shape the letter S; the first curvature taking place in the lumbar, the second in the dorsal, and the last in the cervical vertebræ: as a necessary consequence one shoulder will be higher than the other. Mr. Samuel Cooper accounts for the elongation, by the destruction of the cartilage and ligaments forming the lower and inner part of the acetabulum. M. Boyer attributes the elongation to the swelling of the synovial glands and articular cartilages, and observes that it is greatest when the head of the bone is about to be luxated. In this case, the distance between the trochanter major and the anterior superior spinous process of the ilium will be greater than natural; this would not happen if the elongation proceeded from disease of the ileo-sacral articulation, the trochanter in the latter case retaining its relative position.

Observation has established that the elongation commences at the same time with the pain in the knee, and that both continue for the same period, the latter generally ceasing as soon as the limb shortens or resumes its natural length.

After the disease has continued for some time and the patient has been prevented from taking exercise, the *nates on the affected side* become *flattened and wasted*, are soft and flabby, and lose their natural convexity. This change occurs in the glutæi muscles, particularly the glutæus magnus, which forms the contour of the hip; in accordance with a law of the animal economy, that parts which are not called into their due share of natural ac-

tion, become wasted and enfeebled. This change does not occur in the earliest stages, and is not strictly pathognomonic, since it is common to other diseases which prevent the exercise of the muscles of the hip, as in cases of psoas abscess, or paralysis from vertebral caries. The *four* symptoms above described, characterize the *first stage* of the disease. Its duration varies with the age of the patient and the violence of the symptoms; it is shortest in children, since in them, ulceration of the cartilages or caries of the bones is more rapid in its progress. This is owing to the greater vascularity of the parts affected; in young subjects, also, in part to the greater shallowness of the acetabulum. M. Boyer speaks of having seen children in whom the femur was luxated in the course of two months: also of two adult patients, in whom the pain was excessive, and who passed through the first stage of the disease in the course of an idiopathic fever.

This is not the ordinary course; the symptoms are generally tedious in their progress; there is a want of uniformity in this respect between cases otherwise similar; as a general rule, this period will be shorter as the pain and irritation are more severe. The symptoms do not continue or proceed with equal intensity, and are much alleviated at particular times, without any apparent cause. What is remarkable, the unfavourable appearances frequently alter and are suspended for a considerable period, insomuch as to be seemingly removed; but when they return, it is with increased violence.

The disease, if not arrested before this period, now, if not earlier, begins to show its effects on the constitution; the patient becomes pale and emaciated; is averse to exercise; the appetite is impaired; in short, all these symptoms now manifest themselves, resulting from long continued irritation, loss of rest, and want of exercise.

The aggravation of all the symptoms, the increasing lameness, the pain becoming more acute and confined to the seat of disease, prostration of strength and irritative fever, indicate the approach of the *second or suppurative stage*.

The swelling and increased tenderness around the joint, the skin becoming tense and painful; the occurrence of rigours, with a quick pulse and furred tongue, leave no doubt as to the commen-

cing suppuration. Mr. Samuel Cooper remarks, "that the symptoms vary in different cases, as there is acute or chronic inflammation present. In acute inflammation, the surrounding parts become tense, and extremely painful; the skin reddish, and inflammatory fever prevails. When the severity of the pain abates, a swelling occurs in the vicinity of the joint, and pointing quickly follows. In this stage, startings and catchings during sleep are among the most certain signs of the formation of matter."

The symptom most characteristic of this stage, is a *shortening of the limb*. This may be caused either by the head of the bone being pushed out of the acetabulum, by the state of the parts within the joint, or by the destruction of the bony margin of the acetabulum or of the head of the femur; in either case there is nothing to resist the action of the muscles in shortening the limb. The first kind of displacement constitutes the luxation spontanée, or consecutive, of the French writers, and closely resembles the primitive luxation upwards and outwards, produced by accidents; but a slight examination, and the previous history of the case will readily enable the practitioner to distinguish between them. Its direction is usually upwards and outwards, the head of the bone resting on the dorsum ilii, under the glutæus minimus; knee and foot are turned inwards; the limb is shortened from one and a half to two and a half inches. The position of the knee may vary according to the state of the parts; if the head and neck of the femur are destroyed, it will be turned outwards; luxation does not always occur on the dorsum ilii; the head of the bone may pass into the foramen ovale or ischiatic notch. Boyer mentions one case of the former, and Mr. Earle an instance of the latter; they are extremely rare. Depositions of pus, or of coagulable lymph within the joint, swelling of the synovial glands, or a slight degree of violence to the part, are the principal causes of this luxation. It seldom happens before the occurrence of suppuration, though a case is recorded in which luxation took place, followed by ankylosis, without the formation of abscesses. With regard to the second cause of the shortening, viz. the enlargement of the acetabulum and the diminution of the head of the bone from absorption or caries, I am inclined to the opinion, that it is by far the most common. Of

twenty specimens of this disease in the museum of the college of surgeons of Edinburgh, there was but one example of the consecutive luxation; and in the catalogue of Guy's Hospital Museum published in 1829, there is not a single specimen of this variety to be found. Baron Larrey is of opinion, that the bone is never luxated, but that the shortening is always owing to the cause last mentioned. On one of my visits to his wards at the Hôpital des Invalides, in company with Dr. Mott, the Baron pointed out to us two cases of this disease under treatment by his favourite remedy, the moxa. After some observations on his peculiar views of the nature of the morbid lesions, occasioned by this malady, he invited us into his cabinet, and exhibited a fine dried preparation of diseased hip in the adult, in which the limb could be lengthened or shortened two inches, without the head of the femur passing out of the acetabulum. This was the only specimen he happened to possess at the time, but stated that his experience in this disease had been very extensive, and that he had never met with luxation.

It is not a little remarkable, that Boyer and the majority of French writers should describe this disease as the "luxation spontanée du fémur," when the luxation seems by no means essential, and appears rather as an accidental symptom.

Abscesses usually form around the joint; a defined tumour appears, most commonly, on the anterior part of the thigh over the vastus externus muscle; sometimes in the groin below Poupart's ligament on the inner side of the vessels; at other times, near the ischiatic notch, or midway down the thigh. The dense structure of the fascia lata retards the pointing of the abscess, and aggravates the suffering, which is always increased at this period. After a longer or shorter interval, the abscess bursts, and discharges a yellowish bloody sanies, or a thin fluid mixed with shreds resembling curd. Hectic fever now shows itself: the night sweats exhaust the strength, and if diarrhœa sets in, there is but little ground for hope. The danger from suppuration, varies with the period of life: adults rarely recover. Mr. Brodie asserts that he never knew an instance of an adult recovering after abscesses had formed; children frequently recover, not, however, without anchylosis, or the functions of the joint being impaired. The abscesses remain open for a long time, the dis-

charge varying in quantity at different times ; one will heal and another break out in an adjacent part ; or the abscesses degenerate into sinuses with fistulous openings communicating with the cavity of the joint : without any assignable cause, the suppuration will recur at periodical intervals. There is a patient now in the alms-house, who has been suffering from this disease for years ; as often as once in six months, an abscess forms, and he is brought to the verge of the grave by exhaustion ; his strength then rallies, and in the interval he is able to attend to his business, that of a tailor.

TERMINATIONS.—The favourable terminations are either by ankylosis, or the formation of a new joint by the pressure of the head of the bone on the dorsum ilii.

In the former case, the inflammation subsides, the discharge gradually ceases, the ulcerated surfaces of the bones granulate, and bony matter is deposited ; the femur unites with the os innominatum at an angle more or less acute, depending on the position of the patient during the process, usually at a point midway between flexion and extension ; the union becomes consolidated after a time, and the patient is able to bear his weight upon it, the limb being always shortened ; where a new joint is formed, there will be some degree of motion ; this termination is rare. I saw a fine illustration of it in a specimen from Dr. Cheeseman's collection, in which the newly formed acetabulum is precisely of the same dimensions with the original, and separated from it by a bony margin. The history of the case was not known. When the disease is arrested in its early stages, the functions of the joint are not impaired ; in the latter stages, death is too frequently the only relief from suffering.

PATHOLOGY AND MORBID ANATOMY.—The lesions vary with the nature and stage of the disease. In the worst cases, there is disorganization of all the structures constituting the articulation, and the soft parts are blended into one confused mass. The acetabulum is always more affected by caries than the femur, its bony margin being destroyed and presenting a flat surface ; or its diameters are enlarged, and it is rendered deeper and wider. The caries will often extend through the bottom of the acetabulum, and the matter thus make its way into the pelvic cavity. Even the head of the femur may pass through the opening ; I

have seen one instance of this kind occurring some months after a severe injury. From the greater extent of the caries in the acetabulum than in the femur, some writers suppose that the disease may originate in the acetabulum. The head of the femur is found diminished in size, its cartilage absorbed, and its surface carious : a change also takes place in the cervix femoris, which becomes shortened, and the trochanter major approximated to the head of the bone : its direction, instead of inclining upwards as in the natural state, becomes horizontal : when ankylosis occurs there is usually an irregular deposit of bony matter around the acetabulum and os femoris which becomes very solid, when it has existed for any length of time. Dr. Isaac Wood of this city, possesses a specimen in which the bones are soldered together by their articulating surfaces, leaving the external surfaces as smooth as in the normal condition. Opportunities have occurred of examining the disease in its early stages ; this happened twice in the practice of Mr. Ford ; and from these cases he considers himself warranted in the assertion, that considerable caries may exist before it is indicated by external symptoms. In the first case, "the cavity of the joint contained a small quantity of pus, the head of the femur was slightly inflamed, the capsular ligament thickened, the round ligament attached to the acetabulum in a healthy condition ; the cartilage was in one place eroded, with a small aperture communicating with the ischium on one side, and os pubis on the other. In the second case, there was no appearance of inflammation, no tension or external swelling, the acetabulum was carious, its cartilages eroded, the head and part of the neck of the femur had crumbled away."

Mr. Brodie met with a case exemplifying both stages of this disease. "The disease had long existed in the left hip, and the consequent hectic fever had destroyed the patient. On opening the joint the usual appearances were found ; destruction of the cartilages and round ligament, caries of the bones, with luxation of the femur. The patient had never complained of his right hip, and no disease was suspected ; on accidentally cutting into it, the cartilage of the femur was found absorbed for one-third of its extent, and the surface of the exposed bone covered by a thin layer of coagulable lymph. The soft parts were in a perfectly natural state, and the bones of their ordinary texture and hardness."

In every stage, the cartilages are found ulcerated before the bones or soft parts are at all involved. This has led to a new view of the pathology of this disease, which regards ulceration of the cartilages as the primary lesion, and the caries and other symptoms as secondary affections. Mr. Brodie admits that in some cases the disease commences in the bones, but that this variety is confined to scrofulous subjects. In this case, "the bones, preternaturally vascular, contain less earthy matter, and a cheesy substance is deposited in their cancelli; the cartilage ulcerates in spots, commencing on the surface connected with the bone." According to the best observations, the following is the order in which the lesions occur: ulceration takes place in the cartilages, commencing in that of the acetabulum, sometimes in both cartilages at the same time. The ulceration extends to the bones, which become carious, the head of the femur diminishes, the acetabulum is rendered deeper and wider. An abscess forms in the joint, which makes its way through the synovial membrane and capsule into the thigh, nates, or cavity of the pelvis. In consequence of the abscess, the synovial membrane and capsular ligament become inflamed and thickened, the muscles altered in structure, sinuses form in various parts, and at last, all the soft parts are blended together like the parietes of an ordinary abscess. Some writers of high authority, deny the possibility of a primary disease of the cartilages. They regard them as possessing so little vitality, as to be incapable of inflammation, insensible to the action of irritating substances, and only susceptible of ulceration or exfoliation in the affection of the synovial membrane covering them, or of the bones underneath them. Mr. Velpeau says, "they can never be the primitive seat of disease, never inflame or ulcerate. The ulcerations with which Mr. Brodie has endowed them, belong to the bones and correspond to a softened state or extensive caries; when, in consequence of a contusion or other cause, a point of the osseous surface inflames or alters, so that a morbid product results, the point of the cartilage corresponding, is perforated from within and outwards. If the bone becomes vascular at this point, the cartilage peels off, becomes thin, and disappears insensibly, but does not become diseased; the granulations which are sometimes

seen on the whole extent of an articulation are foreign to it, and belong to the bones."

Mr. Coulson is of the opinion that the synovial membrane, and not the cartilage, is often primarily diseased; he infers this from one of the earliest symptoms; a fulness of the groin, depending, as he supposes, upon the increased secretion into the joint similar to what occurs in synovitis of the knee. Schelius of Heidelberg, a late writer on this subject, coincides with Mr. Brodie, and the weight of authority, at the present day, is in accordance with his views.

CAUSES.—Contusions, especially falls on the trochanter, jumping from a height, lying on the damp ground, exposure to cold, are among the exciting causes of this disease; frequently it will be impossible to account for its appearance. Parents, often attribute its origin to a fall or a false step, which the patient has made a short time before the symptoms manifested themselves. This is a consequence, rather than a cause, and is owing to the weakness of the limb, causing the patient to stumble. A scrofulous habit is a frequent predisposing cause, and was considered by the older writers as the sole cause; hence they termed the disease scrofulous hip, or scrofulous caries of the hip joint; as already observed, this produces one form of the disease, most common in young subjects. Gout, rheumatism, smallpox, and measles are also enumerated as causes.

DIAGNOSIS.—In the early stages, and it is of the first importance that the disease be detected early, it requires careful attention to discriminate between the symptoms peculiar to it and those common to it with other diseases. The diseases most liable to be confounded with it, are, paralysis of the lower extremity from caries of the vertebræ, psoas abscess, chronic inflammation of the soft parts around the joint, congenital luxation, and sciatic neuralgia. In *paralysis* from vertebral caries, both limbs are generally affected; there is no pain in the knee, or lengthening of the limb. The nates become wasted from inaction. On examining the spine, there will be tenderness over some of the spinous processes, or a projection; patients will also complain of a dull pain in the back.

In **PSOAS ABSCESS** the dense fasciæ of the muscles of the back preventing the pus from making its way to the nearest

surface, it takes the course of the psoas muscle, and shows itself below the groin, or immediately under Poupart's ligament. The thigh will be bent forwards, owing to the contracted state of the muscle from irritation at its origin; this gives a flattened appearance to the nates of the affected side. There is, however, no pain in the knee, the motion of the joint is free and unimpaired, and there is one symptom peculiar to this affection, a sense of weakness in the loins, at the origin of the psoas, and tenderness of this region upon pressure. In the *congenital luxation*, the thigh is shortened from a vicious conformation, the limb can be lengthened by gentle traction, without pain, but it shortens as soon as the traction is discontinued. The buttocks are natural, the movements of the thigh free, and the foot rests firmly on the ground.

In *chronic inflammation* of the soft parts around the hip, there is no tumefaction of the nates, the pain is less severe, and confined to the diseased parts, not much aggravated by motion, nor relieved by rest.

Acute inflammation of the joint from falls on the trochanter, may be distinguished by the history of the case; the pain is very acute, and occurs soon after the accident, the patient is unable to bear any weight on the limb, the slightest motion occasions great suffering. The inflammation may, however, terminate in ulceration and caries, resembling the idiopathic disease, except in its early stages.

In *sciatic neuralgia* the pain follows the course of the sciatic nerve; there is nothing anormal in the position of the trochanter, nor in the length of the limb.

Rheumatic inflammation of the hip, may be distinguished by the suddenness of the attack, the severity of the pain, which is confined to the joint, the sympathetic fever, and the inability of motion in the part.

After the spontaneous luxation has occurred, one would suppose it hardly possible to confound it with that resulting from accident, yet this does occasionally happen, particularly in the practice of *professed bonesetters*, as they are denominated: I have heard of two instances in this city, in which pulleys have been applied, and the unfortunate patients subjected to the tor-

ture of violent extension, through the culpable ignorance of the attending physician.

PROGNOSIS. — It will be favourable if the patient is of good constitution, and the disease is seen in its early stages; if suppuration has not taken place, there is a prospect of a permanent cure. Dr. Physick says: "that he has never failed, in one instance, to effect a cure in the early stage; but when suppuration had occurred, he had never succeeded in restoring the use of the limb." If the suppuration be long continued, and the patient feeble, he will probably fall its victim. There are fewer fatal cases, in proportion, among children than adults. Where the disease has originated from external violence, the prognosis will be more favourable than in that from an internal cause.

TREATMENT. — The indications are few and simple: to diminish the inflammation, to prevent exercise of the joint, and to support the patient under the suppuration. If there be great tenderness on pressure with unnatural heat, cupping, leeches, or even a general bleeding, may be required; it is advisable to continue the local depletion, so long as these symptoms continue. No exercise of the joint should be permitted, absolute rest is indispensable; without it, our remedies will avail but little: the patient must be confined to bed, and not be allowed to leave it under any circumstances. As it has been shown that exercise of the limb always aggravates the symptoms, the necessity of preserving the limb in a state of perfect quietude is obvious. In some cases, rest will alone be sufficient to effect a cure. It must be admitted, that the patient's general health may suffer from want of exercise; but the danger from this source is infinitely less, than from the uninterrupted progress of the disease. If it be practicable for the patient to take passive exercise in the open air, in a horizontal position, as in a palanquin or sedan, it would greatly improve his health, as well as relieve the *ennui* of his condition. When the acute stage of inflammation has passed then counter irritation will be of service. This is used under various forms, as irritating ointments, blisters, setons, issues, moxa and other varieties of the actual cautery; as regards their comparative merits, blisters act more promptly, and are therefore better adapted to acute cases; the cautery acts through a greater thickness of parts, and is more applicable to chronic

cases. Irritating ointments hold a middle rank between the two. The point selected for applying revulsion is the hollow behind the trochanter major. This is not so near the articulation, as a point on the anterior part of the thigh; but the situation of the vessels, precludes the application of such remedies at this part. Issues and setons are most commonly employed; they must be continued so long as any symptom of the disease remains, and it is prudent to persist in their use, for some time afterwards, to prevent its recurrence. When suppuration occurs, the abscess is not to be opened early: some surgeons of high reputation, are opposed to any interference with the efforts of nature; it is found that, generally, those cases do best in which this course is pursued. When the skin becomes very thin, and the abscess is fully matured, we shall shorten the patient's sufferings by giving exit to the matter. The strength is now to be supported by nourishing diet and tonics, if required. In cases connected with scrofula, iodine, in the form of Lugol's solution, may be given with advantage: its application externally in the form of ointment, is also recommended. If we have reason to expect the occurrence of ankylosis, the limb is to be retained in a position in which it will be of most service to the patient in walking, viz: in a state of demi-flexion. Different methods have been devised for preventing motion in the affected member; splints and bandages are sometimes used, but these cannot be well adjusted to the hip, and are of little use. The method recommended by Mr. Scott, consists in enveloping the joint in several layers of thick plaster, (lead, or soap-plaster,) the whole to be secured by a calico bandage. Dr. Physick contrived a hollow splint, carved so as to be well fitted to the limb; this answers the purpose exceedingly well, and will be spoken of more fully hereafter. The felt splint fits very accurately, but is objectionable on account of its being expensive. The most recent method is that adopted by Velpeau, viz: the starch bandage: the whole limb is to be enveloped in a bandage, from the foot upwards, in the usual way, with the spica for the groin; the whole is then thickly covered with starch, and the limb secured in a position midway between flexion and extension, until the bandages become firm. This fulfils the indication sufficiently well, and its cheapness renders it of universal application.

Dr. Wm. Harris of Philadelphia, recommends the use of Hagedorn's apparatus, modified by Dr. Gibson, as fulfilling the two-fold indication of preventing motion of the limb, and of keeping up continuous extension, until ligamentous union, or ankylosis has taken place, thus preserving the length of the limb.*

The late Dr. Physick was very successful in his treatment of this disease: a summary of his peculiar method will form an appropriate conclusion to our observations.

He confined the patient to bed, in a horizontal position, the bed to be a well stuffed mattress; he commenced the treatment with a mercurial purge. After the patient had been kept quiet for a few days, he then made a careful examination of the hip, and if he found it inflamed, swollen, and tender, prescribed leeches to the part, with a light, wholesome diet. He then commenced a course of steady purging, by the pulvis purgans, in doses sufficient to procure several copious evacuations daily. He considered the drain from the bowels and the irritation there set up, as superior to issues, setons, or other external remedies. Having pursued this plan for a few weeks, and accustomed the patient to the bed, he next applied a hollow splint of one half the diameter of the limb, extending from the middle of the thorax to the external malleolus; it is carved out so as to suit the irregularities of the thigh and leg, is accurately fitted to the limb, after being well padded, and is secured by rollers around the pelvis, thigh, and leg. When first applied, it occasions great uneasiness, and cannot be kept on for more than an hour. In the course of five or six days it may be worn permanently, and the limb will be uncomfortable without it. The time required for a cure will vary from six months to two years; the usual period is twelve months; the splint is to be worn constantly, and not taken off until some time after all the symptoms have subsided, when the exercise of the limb may be cautiously commenced.†

* See Medical Examiner, No. 3, for 1839.

† A detailed account of this treatment may be found in the American Journal of Medical Sciences, No. 14.

ART. VI. *A case of Abstraction of the Uterus after Delivery.*
Reported by JNO. H. GRISCOM, M.D.

THIS astounding case having created much excitement in New-York, and indeed wherever the newspapers have carried the report, (incorrect and incomplete in many particulars,) it is deemed proper that a detail of the circumstances attending it, should be correctly recorded. On the 7th of April, 1839, at the request of Ira B. Wheeler, Esq., coroner, I examined the body of Mrs. Cozzins, the wife of a respectable mechanic, No. 328 Madison-street, at the time absent from the city. I was assisted in the examination by Dr. S. C. Ellis, in the presence of Drs. Nichols, Lobstein, and Walters. Before the examination, we obtained the following history:—Mrs. C. was delivered of a healthy, living child, about one A. M., without any other assistance than her sister and a female friend, both married, and the former a mother. The cord was tied and cut *secundem artem*; but the placenta was retained beyond the usual time. Three hours having elapsed without its disengagement, the sister went for a physician and obtained the services of Septimus Hunter, who represented himself to be a physician, but was at the time a clerk in a drug store. Upon his arrival, he immediately addressed himself to the task of removing the placenta, the successive stages of which operation will be mentioned presently.

We were shown prior to the dissection, a mass of fleshy substance in a washbowl, which I at once recognised as a uterus; also, in another vessel, the placenta was shown us, which was entire, but without a vestige of the umbilical cord attached to it. The latter was subsequently discovered in a pail of dirty water.

On stripping the body, the abdomen was found very sunken. The usual incisions were made, and the following uncommon appearances were presented: 1st. A total absence of the uterus. 2d. The broad ligaments much torn and ragged, and partly deficient. One fallopian tube was absent, but both ovaria remained *in situ*. 3d. The upper extremity of the vagina was open and free, so that the hand introduced from without would pass directly into the cavity of the abdomen, and the intestines could

be touched. The intestines were high up as left by the contracting uterus. 4th. A considerable quantity of extravasated blood was seen on each side near the ovaria, forming spots of ecchymosis beneath the membranes. No effused blood was seen, however, within the abdomen, except this. 5th. A laceration of the vagina, about an inch and a-half in length, a short distance from its superior extremity.

By reverting to the uterus, we found the deficient parts attached to it, viz: one fallopian tube, entire; a portion of the broad ligaments, and about an inch of the upper end of the vagina, which had been divided by an even circle, though manifestly without the aid of any cutting instrument. The external surface of the uterus was about half denuded of its peritoneal coat, leaving the muscular fibres entirely bare. Its internal surface was smooth, and the part where the placenta had been attached very apparent, presenting a slight brown colour. The whole organ was about the size of a child's head at birth. Large quantities of coagula were about the body; the bedding was thoroughly soaked with blood, and a large puddle of it, of a bright red colour, covered the floor beneath the bed.

The examination of an intelligent female witness before the coroner's jury, developed the following facts:—Immediately after the *quasi* doctor arrived, he took hold of the cord, and making strong traction upon it, he completely inverted the uterus, the placenta still adhering; pulling still harder, he severed the cord from its attachment and gave it to the witness. He then took hold of the placenta, removed it, and laid it aside, saying there was more to come away still. He then grasped the uterus of the unfortunate patient, and by dint of "excessive" pulling, after about three quarters of an hour, (during which period he relaxed his efforts occasionally to rest and remove his coat, the miserable patient constantly uttering the most piercing and heart-rending cries, such as "you are tearing my heart out, &c..") he succeeded in dragging the uterus from its attachments, and separated it from the body, holding it in his hands, and exhibiting it as a proof of his prowess and skill, saying that "he never had met with such an extraordinary case before." When asked what it was, he replied "either a polypus or a false conception." During this brutal operation, the groans of the suffering woman were

at first strong and loud ; these together with the force which the man was seen to use, excited the alarms of the attendants, who urged him to desist and allow other medical advice to be called ; but with incredible hardihood he persevered, insisting that all was right, that she must endeavour to be patient, and that *he would be responsible for her life*. Towards the close of the performance, her cries became more and more faint, and at length entirely ceased. He thought she was endeavouring to support the pain with patience, and encouraged her in so doing by words. When he turned to look after her, and to feel her pulse, he found that she was dead.

It is due to the profession to say, that the performer of this horrible tragedy is not, *de jure*, a member of the profession, though he asserts that he has a *recommendation* from three surgeons of the British Navy, of his medical proficiency, and that he has had a large amount (three hundred cases) of obstetric practice. He appears to be about thirty-two or thirty-three years of age, and has been in this country two years.

Strange as it may appear, this is not the first occurrence of the kind. Three other cases have come to our knowledge, the history of one of which bears a very close resemblance to that of Hunter's. It occurred in the town of Pulaski, in the state of New-York, the deed having been performed by a man of advanced years, and who though a quack, had had many opportunities for experience. The details are succinctly given in the following communication addressed to Dr. Swett, by Mr. T. S. Markoe, an intelligent medical student, who was cognizant of all the facts at the time of their occurrence, and saw the preparation.

“ *To Dr. J. A. Swett.*—The woman had had a perfectly natural and easy labour. The child was born and removed from the mother, but the placenta was retained. After waiting a certain time, the practitioner in attendance judged it necessary to pass in his hand in order to extract it. He did so, and as he thought, found the placenta attached very firmly near the mouth of the uterus. He then undertook to peel it off from its attachment but found the greatest difficulty in doing so, it was so closely adherent that repeated and long continued efforts were

made without success. Supposing, however, that the life of his patient and his own professional reputation depended upon his succeeding, he redoubled his efforts until, as he himself said, he was exerting a degree of force which made him fearful for the consequences. During all this time the woman was screaming loudly, and exclaiming that he was killing her. Still thinking that he had the placenta, he persevered, until at last it yielded entirely, and he commenced to extract. The extraction was strongly resisted by something, and much exertion was still necessary to bring the mass down to the external parts. Labouring under the same fatal delusion, he succeeded by dint of main force in bringing it quite out from the body of the mother. "Judge of my surprise," says he, in the paper which he wrote in his defence, "when I found that I had the whole uterus in my hand." However, the mischief was done, and he thought all he could do, was to separate the few remaining attachments, which he did, by tearing them off, and put the whole out of sight as quick as possible. The girl to whom was allotted the office of disposing of it, seeing in the whole procedure something suspicious, fortunately preserved the specimen. The poor woman immediately after the performance of this barbarous operation, began to sink, and was soon in a dying condition. No hemorrhage ensued, but the shock to the nervous system was such that she expired in about two hours.

On examining the uterus, it was found about twice as large as a child's head at birth, containing within its cavity, the placenta *loose and unattached*. One of the ovaries had been brought away with the lacerated broad ligament; the broad ligament of the opposite side and the fallopian tube, were torn through quite near the uterus; the posterior surface of the uterus was rough and covered with cellular shreds and without a peritoneal coat; the peritoneum still covered the anterior and superior parts. The old man says that his mistake occurred in this way: the edges of the *os tincæ* being relaxed and protruding into the vagina, he mistook this protrusion for the edge of the placenta; passing his fingers into the *cul de sac* which the vagina makes with the neck of the uterus, he perforated the coats of vagina supposing he was separating the placenta. His fingers were thus behind the uterus which he proceeded to tear from its con-

nections. From inspection of the uterus, it is plain that he separated it from the peritoneum, over the whole posterior surface, and perforated this membrane at its upper part. Supposing then that he had detached the placenta, he extracted the uterus by main force, as above mentioned. The vagina was torn off very short."

Another case is mentioned by Bartholin. I have not seen the original report: the following concise notice of it is from James's Edition of Burns's Midwifery, 1823, vol. i. p. 522. "Bartholin relates a case, where the inverted womb was torn away, and found under the bed of the dead patient."

The last of these cases we find noticed in the Med. Chir. Rev. for April, 1836. As that Journal is accessible to most of the profession, we will give but a brief summary of the case, referring to the paper itself for the minutiae. The woman, after a labour of 63 hours, gave birth, under the care of a midwife, to a sound child. The placenta followed whole in a quarter of an hour, expelled by a pain. She did well for about 36 hours, when the midwife was summoned hastily. "She ascertained the following particulars: the woman had risen during the night, and had gone into an adjoining room to make water; while there, she had, by her screams, alarmed her husband, who called in some of her neighbours; and upon entering the apartment, they found the woman seated on a stool, before the fire, with a vessel of warm water in front of her, and a large substance which they compared to a child's head and neck, lying between her thighs, supported by her hands." The midwife found her on the bed, pale from loss of blood, which had been excessive. "On examination, she discovered a hard substance lying on the bed, *loosely connected to the vagina by a shred of membrane only*. This substance she immediately recognised as the uterus, and lifting it gently, removed it without difficulty or effort."

Mr. Cooke, senior, a member of the profession, visited her soon after, and found her completely exhausted from the hemorrhage, but restless and agitated. Notwithstanding this extraordinary dismemberment, the woman entirely recovered her health, and became robust and active.

We are left totally in the dark with regard to the means by

which the uterus became so nearly detached before the arrival of the midwife. It cannot be believed, that the patient herself could have used force enough to tear it nearly off; and the husband and friends would have certainly known whether any improper force had been applied by the midwife. Speculation, therefore, upon this deficient point in the report, would be useless.

The question was asked by members of the grand jury who indicted Hunter, whether such an operation must necessarily terminate fatally. It was answered affirmatively. This was before the case reported by Cooke came to my notice, which raised for awhile a doubt in my mind; but upon reflection, I continue of the same opinion. In the first two cases, and doubtless in the third, violence was used immediately after delivery, before the action of the uterus had subsided, and before the blood-vessels had in any degree returned to their usual dimensions. The sympathy between the uterus and the whole nervous system, if greater at one time than at another, must then be at its height, and the patent blood-vessels, if ruptured, must then pour forth blood with the greatest freedom.

In two days after delivery, the sympathetic connection of the uterus must in some measure have diminished, being transferred to the breasts, (which was the fact in Cooke's case, the child having nursed,) and the blood-vessels have contracted considerably, whence the loss of blood, though "excessive," having been arrested when the uterus was actually removed, was not sufficient to prevent a reaction. There are but two modes in which it is at all likely that death will ensue, under such treatment: the first is from the violent shock given to the nervous system, and the second from the loss of blood. Now it seems to me that one or the other, if not both of these, must inevitably result from such an operation, performed at such a period.

It is to be hoped that we may never hear of another case to appeal to for a settlement of the question.

ART. VII. *Extirpation of a Part of a Rib for Neuralgia.* By
E. H. DIXON.

OCT. 16, 1838.— Jane Bailey, aged thirty, two years ago, was overturned in a carriage, and dragged something like a mile, receiving various contusions, and being taken out insensible. No lasting injury was the result, with the exception of a severe pain over the tenth rib of the left side, for which she received no treatment at the time, saving the customary bleeding practised on such occasions. A few weeks after the injury, the affected spot became the seat of a small irregular projection, and of exquisite and constant pain. This pain I conceive to have been neuralgic in character, from the commencement, inasmuch as it was occasionally of equal violence for weeks together, and not accompanied with other signs of inflammation. It would subside partially for a few hours, and then recommence with such intolerable severity, that the patient assured me death was anticipated as a relief to her misery. She had some little cough, with no expectoration; the cough I concluded to be the result of irritation, and constant loss of sleep, as I could detect no signs of pulmonary disease. The pain extended forwards and upwards, (from the projection which seemed to be near the sternal extremity of the rib,) over the stomach; upon turning her head and shoulders to the opposite side, so as to throw out the ribs, the projection was evidently caused by the end of the rib, as though the cartilage had been broken off. I at first thought it a fracture, with a redundant growth of bone, but, upon further examination, concluded the rib to be natural, though I could not account for its projection, without supposing a fracture to have occurred between the prominence and the vertebral articulation, thus destroying the natural curvature of the rib, opposing the action of the intercostal muscles, and favouring the absence of the cartilage; all this would sufficiently account for the projection. During the two years preceding the operation, the patient had been repeatedly cupped over the affected region, with momentary relief; part of this time was spent in the New-York Hospital;

her pain over the stomach being very acute ; she had been treated whilst there for organic affection of that viscus. This, however, it seemed rational to explain, upon the principle of pain being continued from the irritated nerve, to its distribution ; the anterior branch of the intercostal nerve going to the muscles and integument over the stomach. It was evident that counter irritation, however severe, would produce no benefit in such a case, and as the extirpation of part of the nerve itself was impossible, without the certainty of opening the cavity of the pleura, I resolved to remove the projecting portion of the rib, hoping that when the tension was removed, the pain would cease.

After agreeing in a diagnosis of its neuralgic character with Dr. S. P. White of this city, with his aid, and in presence of Dr. Throemorton, Weeks, and Guion, I removed about two inches of the rib, by means of a very cautious dissection ; leaving the cavity of the pleura unopened ; the cartilage was not attached, being, most probably, absorbed. There was nothing either peculiar or difficult in the operation ; not a bad symptom ensued ; the wound healed by adhesion in a week, the pain was removed instantly, and has not returned ; the patient was examined by Dr. John Watson on the 15th of May, to whom she stated, that she had gained twenty-three pounds of flesh, a sufficient evidence, that a severely irritating cause had been removed.

Should this operation be thought unwarrantable, I can only say, that I knew of no other means of relief, and that the patient importuned me for three months to perform it, after having been told by many surgeons of eminence, as well as by myself in their presence, that it might prove fatal. She uniformly answered, that death was preferable to the life she endured. It is highly important that the extent and danger of operations, that may conscientiously be performed for neuralgia, should be determined, as the strongest constitution will, in time, yield to its violence. I have myself, witnessed instances, where long continued and exhausting irritation, even from tooth-ache, has been the evident cause of death ; and, at this moment, I have a patient under my care, who would gladly lose a limb for relief from a neuralgic affection, involving the entire ankle joint. In this case, every other method, both constitutional and local, has already been tried in vain, and the powers of a naturally vigorous constitution, are yielding to its undermining influence.

HOSPITAL REPORTS.

A Report of Cases of Remittent Fever treated in the Medical Wards of the New-York Hospital, during the Summer of 1836. (F. U. JOHNSTON, M.D., Attending Physician.) By N. SHOOK, formerly Resident Physician.

THE New-York Hospital contains 108 beds for medical patients. During the year, the whole number of admissions into the medical wards is between eight and nine hundred.

The main building of the Hospital receives patients affected with all the acute diseases incident to the city and its neighbourhood.

The regulations of the Hospital exclude all incurable cases, (unless under circumstances of peculiar interest,) such patients being provided for at the Bellevue Hospital.

One building, however, is exclusively devoted to the reception of seamen, without reference to the nature of their diseases, (always excluding those that are strictly contagious;) hence we have among them diseases contracted at sea, in the different ports of the United States, and in foreign countries.

This regulation admits a great number of cases of fever, which, in consequence of the commercial relations of the city of New-York, and its crowded population, are of frequent occurrence during the summer and autumn.

The resident physician of the Hospital has every facility for the examination of patients, and for observing the treatment under the immediate direction of the attending physician.

This Report contains a summary of the cases of fever admitted into the Hospital during the five months ending October 1st, 1836. Its chief object is to make known our success in the treatment of remittent fever; of that form, especially, occurring among seamen from the southern states, called southern remittent, bilious, or malignant remittent, and in many respects resembling yellow fever; but as this year was remarkable for the great prevalence of typhus and typhoid fevers, not only in this city, but also in Philadelphia and in other seaports of the United States; and as reports of the cases occurring in these cities have been already published, I have determined to present a summary of the cases admitted into the New-York Hospital. This arrangement will enable me, also, to present, in strong contrast, the characteristic features of the different forms of fever.

While a walker of the Hospital during the summer and autumn of 1835, I had an opportunity of witnessing the great mortality which prevailed among the sailors arriving, with remittent fever, from the southern sections of the country, especially from the ports of Savannah, Ga. and Wilmington, N. C., these patients often dying within 24 hours after their admission into the Hospital. This great mortality may, in a measure, be accounted for when we reflect that three-fourths of the patients were attacked with the disease at sea, and were without medical treatment; so that by the time they had arrived in port and could be conveyed to the Hospital, the disease had approached its termination, rendering treatment of little or no effect.

I have also observed a fever always prevalent in this city during the summer months, called remittent fever, but entirely different in its symptoms, fatality, and pathological characters, from the above fever.

I had noticed, finally, that physicians of the first reputation differed very materially in their treatment of these fevers; hence I felt anxious to obtain a more accurate knowledge of their symptoms and pathology, but more particularly to investigate the merits of the *mild, stimulating, and supporting mode of treatment* pursued for many years by Dr. F. U. Johnston, one of the attending physicians of the Hospital. I regret that the large number of cases received prevented me from taking as minute notes in each case as I had intended to have done.

From the 1st of May to the 1st of October, 170 cases of fever were admitted, viz.

94 of remittent fever, of which	4 died.
47 of intermittent fever,	0
20 of typhus fever,	6
10 of typhoid fever,	5

REMITTENT FEVER.

Among the 94 patients admitted with remittent fever, the smallest number entered in May, the largest in September, as follows :

May,	5 patients.
June,	6
July,	10
Aug.	26
Sept.	47

More than 50 of these cases occurred in patients between the ages of 20 and 25 years ; only 10 below the age of 20 years ; 8 between the ages of 30 and 40 years — two above the age of 40 years. Of the whole number, 48 were sailors, and 46 labourers in the city or its neighbourhood.

Four cases terminated fatally, and 90 were discharged cured. One of the deaths occurred in a young female, who died of phthisis about 3 months after her admission. Two of them occurred among the sailors who were attacked with the fever in Wilmington, N. C., and who died soon after admission. The remaining death was that of an Irish labourer who was attacked while at work, a few miles from this city.

Those at all acquainted with the New-York Hospital, must be aware of the extreme severity of the southern remittent fever as it occurs among seamen during the months of September and October. No cases demand greater attention or more prompt and decisive treatment. It will be seen, however, by this report, that there were but 4 deaths in 94 cases. It may be thought from this, that the disease was milder than usual. I can only say, that Dr. Johnston, who has observed and treated this fever for many years in succession, both as it occurs among sailors coming from southern ports, and among the labouring classes in this city, was of the opinion that it presented the same symp-

toms of severity, the same history and pathology, as in former seasons, only that an unusual number of patients were admitted. Every attention was paid to the patients; every symptom was observed and noted at the bedside, in the morning, at noon, and in the evening. No patient was left alone at any time; he was visited every second hour, or oftener, if necessary.

The cases in the marine building were noted as distinct from those admitted into the main building, although all were called remittent fever. There was, however, a manifest difference between these cases, although I have called them by one name in this Report. Those occurring among sailors from southern ports were more malignant in their nature, more marked by congestions and by bilious symptoms, and of course more fatal. The class of persons usually attacked were also more dissipated; their constitutions having suffered from previous excesses, and I may add, from previous attacks of the same disease; for I have seldom asked a sailor if he had ever had the disease before, without his answering me in the affirmative. But very few of the cases originating in the city or its neighbourhood, were of the same bilious and congestive character; all the milder cases, however, in either class, presented the same symptoms, course, and termination, and were equally under the control of remedies. All the very severe cases were admitted during the months of August and September. I shall confine myself, therefore, to the 47 cases treated by Dr. F. U. Johnston, during the month of September, in which the course of treatment was the same, and not one case terminated fatally.

NAMES.	AGE.	EMPLOYMENT.	ADMISSION.	DISCHARGE.	RESULT.
James Smith,	30	Labourer,	Sept. 1,	Sept. 30,	cured.
Anthony Tonone,	19	do.	" 1,	Oct. 12,	do.
James Riland,	20	do.	" 1,	Sept. 13,	do.
J. B. Maskue,	34	do.	" 2,	Oct. 7,	do.
James Parker,	16	Seaman,	" 2,	Sept. 11,	do.
Fredk. Knownes,	21	do.	" 2,	Sept. 17,	do.
Peter Grant,	27	do.	" 2,	Oct. 26,	do.
Wm. Darley,	23	do.	" 3,	Oct. 3,	do.
Jacob Hock,	14	do.	" 5,	Oct. 3,	do.
Robt. Arnold,	27	do.	" 6,	Oct. 3,	do.
Wm. Banks,	19	do.	" 7,	Sept. 26,	do.

NAMES.	AGE.	EMPLOYMENT.	ADMISSION.	DISCHARGE.	RESULT.
Thos. Brooks,	25	Seaman,	Sept. 7,	Nov. 19,	cured.
James Stewart,	25	do.	" 8,	Oct. 3,	do.
Thos. Murvin,	25	Labourer,	" 8,	Oct. 1,	do.
Timothy Delano,	19	Seaman,	" 10,	Sept. 18,	do.
John Richin,	32	do.	" 10,	Oct. 1,	do.
Chas. Smith,	25	do.	" 10,	Sept. 25,	do.
Edward Murray,	23	Labourer,	" 12,	Sept. 26,	do.
Wm. Hobert,	24	Seaman,	" 14,	Oct. 3,	do.
Chas. Shorfenburg,	26	do.	" 16,	Sept. 26,	do.
John Shorten,	27	Labourer,	" 17,	Nov. 18,	do.
Adolphus Frisby,	36	do.	" 17,	Oct. 13,	do.
Walters Coleman,	25	do.	" 17,	Oct. 13,	do.
Wm. Davison,	23	do.	" 19,	Oct. 20,	do.
John Grady,	29	do.	" 20,	Oct. 30,	do.
Anne Harris,	21	Servant,	" 20,	Oct. 20,	do.
David McClark,	30	Seaman,	" 21,	Sept. 30,	do.
Joseph Webber,	19	do.	" 21,	Sept. 28,	do.
George Williams,	16	do.	" 21,	Sept. 28,	do.
Mich. McNelly,	18	do.	" 22,	Nov. 10,	do.
Patk. Krael,	20	Labourer,	" 23,	Sept. 7,	do.
Wm. Romey,	30	do.	" 23,	Oct. 28,	do.
Fantom Adams,	27	do.	" 23,	Oct. 22,	do.
Andrew Johnson,	36	Seaman,	" 23,	Oct. 24,	do.
Benj. Durand,	28	do.	" 23,	Sept. 26,	do.
Adolphus Owey,	29	Labourer,	" 26,	Oct. 10,	do.
Dennis Marran,	22	do.	" 26,	Oct. 1,	do.
Fantom Duff,	48	do.	" 26,	Oct. 15,	do.
Mastin Breman,	47	Seaman,	" 26,	Oct. 31,	do.
George Sharp,	30	do.	" 26,	Oct. 13,	do.
Thomas Robinson,	17	do.	" 26,	Oct. 24,	do.
Daniel Adams,	39	do.	" 27,	Oct. 24,	do.
Dennis Krael,	20	Labourer,	" 27,	Oct. 7,	do.
Hugh O'Donald,	22	do.	" 28,	Oct. 7,	do.
Geore Eunson,	27	Seaman,	" 28,	Oct. 13,	do.
Jas. McLaughlin,	25	do.	" 29,	Oct. 15,	do.
Alex. Sutherland,	37	do.	" 30,	Oct. 24,	do.

Case I. — JAMES SMITH, aged 30, farmer, admitted September 1, 1836, with the following symptoms :

Great prostration of strength; lies upon his back; countenance dejected; cheeks flushed; lips dry; tongue dry and coated, with a thick brown fur in the centre, moist at the tip and edges; constant thirst; aching pains all over the body; cephalalgia severe; pulse 100, no petechiæ, a few sudamina on the neck;

abdomen distended, and somewhat painful to pressure ; bowels have not been evacuated in two days.

HISTORY.— This patient was attacked with the fever eight days before admission, while at work, as a farmer, in a low marshy district a few miles from the city ; the disease was ushered in by a chill, succeeded by flashes of heat ; then pains in the limbs, great weakness, and loss of appetite.

Says he had a slight chill followed by heat, and thirst, every morning and evening.

Had taken no medicine before admission.

TREATMENT.— September 1st, 1836. The patient entered the hospital last evening, and took a purgative of calomel and rhubarb ; this morning feels better ; bowels moved three times, free evacuations ; fever during the night severe ; skin hot, thirst intense, desires ice, mind excited, but not delirious. Directed the spirit of Mindererus ; beef soup for diet ; Dover's powder at bedtime.

3rd. Symptoms the same, except a more distinct remission of the fever this morning. Snake root tea as a drink ; and the spirit of Mindererus during the exacerbations of fever.

4th. Patient complains of soreness at the epigastrium, pain and soreness in the back very severe towards evening, entirely removed in the morning ; tongue remains dry ; bowels evacuated once since yesterday.

5th. This morning, found the patient with a warm, soft, moist skin ; tongue moist ; pulse calm, 90 ; indeed all the febrile symptoms abated. Now, the patient was directed a grain of the sulphate of quinine every second hour, to be discontinued in the evening, if the fever recurs to any extent.

Under this treatment, the patient rapidly convalesced, and was discharged cured, Oct. 1, 1836.

Case II. — ANTHONY TONONE aged 19, labourer, admitted September 1, 1836.

SYMPTOMS. — Countenance dull and heavy ; eyes suffused and glassy ; not much prostration of strength, but complains of aching pain in the head, back, and legs ; lips and mouth dry and parched ; tongue entirely dry, covered in the centre with a thick brown fur, red at the tip ; pain and great tenderness at the epigastrium ; abdomen tympanitic, but not painful ; skin hot ; pulse 90, with some force ; respiration hurried ; no eruption of any kind upon the body.

HISTORY.— This patient was attacked a few days after his arrival in the city, with remittent fever ; his previous health and habits were good ; he had been ill 6 days previously to his admission into the hospital ; he was attacked by a severe pain over the eyebrows, a chill, and loss of appetite ; he had never had fever before ; he had taken a dose of castor oil the day before admission.

TREATMENT.— September 1, 1836. The dose of oil taken yesterday has not operated. Patient feels very restless and complains of pain in the back and head. Directed a purgative dose of calomel and rhubarb, and the spirit of Mindererus.

2d. Bowels moved three times, free evacuations of dark liquid offensive stools ; less fever this morning ; snake-root tea as a drink ; gruel and arrow-root, and the spirit of Mindererus during the exacerbations of fever. This treatment was continued until the 9th, when the patient was directed a grain of the sulphate of quinine every second hour, to be discontinued during the exacerbations at night, and to be resumed in the morning ; a bottle of porter daily, and nourishing diet. The symptoms at this time were much the same as at the time of his admission.

On the 10th, I found the patient much improved ; tongue moist, the edges covered with a whitish sticky saliva, as is seen in typhoid fevers when the mouth is first affected by mercury ; slept well last night ; very little fever this morning ; skin moist and soft. From this time, (pursuing the same treatment) he convalesced, and was discharged cured, Oct. 1, 1836.

Case III. — JAMES RILAND, aged 20, servant, admitted September 1, 1836.

SYMPTOMS. — Countenance dull ; lips pale ; no delirium ; great prostration ; aching pains in the head, back, and limbs ; thirst ; skin hot and dry ; tongue coated in the centre with a thick whitish fur, but moist, red at the tip and edges ; in the evening during the exacerbation of fever the patient becomes restless, tossing about in bed ; no sleep ; no nausea or vomiting ; abdomen painful on pressure, apparently more the result of increased sensibility of the skin than of inflammation ; pulse 100, and feeble ; one or two liquid stools a day.

HISTORY. — This patient had arrived in New-York four weeks before his illness ; his previous health and habits were good ; he was attacked with the fever ten days before admission, but took no medicine of any kind. Says he was suddenly seized with a severe pain across the forehead ; he had no chill, but great heat and thirst.

TREATMENT. — September 1, 1836. The patient was directed at bedtime ten grains of calomel and one of opium.

2d. But one evacuation since last evening ; less fever this morning ; slept some last night. The patient was now directed the snakeroot tea as a drink ; the spirit of Mindererus during the exacerbations of fever, and nourishing diet.

3d. The symptoms the same as yesterday ; pulse last evening 110 with some delirium, but he is easily aroused and answers questions rationally.

P. M. Found the patient with a soft moist skin ; tongue moist ; less cephalalgia ; pulse about 95.

4th. Commence the quinine ; the bowels not having been moved for twenty-four hours the patient was directed one ounce of castor oil.

5th. Patient not quite so well ; more excitement ; bowels not moved ; the eccoprotic mixture (rhubarb and magnesia) was given, which, in the course of three hours caused two copious evacuations ; quinine discontinued.

7th. Patient much better ; resume the quinine.

9th. Patient convalescing ; continue the quinine.

13th. Discharged cured.

Case IV.—JOHN B. MASKUE, aged 34, labourer, admitted September 2d, 1836.

SYMPTOMS.—Great prostration; lies upon his back; some stupor, but easily aroused; complains of great pain in the back and legs; cephalalgia moderate; eyes suffused; conjunctiva a little yellow; countenance dejected; lips and mouth parched; tongue dry in the centre, moist and clean at the edges; skin very hot and rough; respiration hurried and laborious; lungs not affected; abdomen painful upon pressure; epigastrium tender; pulse 100, and feeble; bowels free; one or two liquid stools during the day.

HISTORY.—The patient arrived in this country but a few weeks before his illness; he was attacked with the fever nine days before his admission. He says he had a slight chill, succeeded by flashes of heat, every afternoon since his sickness, but no distinct interval without fever. No medicine given him previous to his admission.

TREATMENT.—September 2d. The patient was directed the eccoprotic mixture, composed of rhubarb and magnesia.

3d. Patient the same as yesterday; bowels freely operated on by the medicine, stools more consistent. From this time to the 8th, he took an occasional dose of oil, whenever his bowels were costive, Dover's powder at bedtime, and a table spoonful of the spirit of Mindererus every second hour, with a light farinaceous diet.

On the 8th of September, being the sixth day after his admission, and the 16th day of the fever, finding no abatement in the symptoms, Dr. Johnston directed him to take a grain of the sulphate of quinine (in solution) every second hour; a bottle of porter daily, and as a drink, the snakeroot tea; also, beef soup.

At the time the patient commenced this treatment, he presented the following symptoms: tongue dry and cracked, not much coated, (at his entrance, the edges of the tongue were moist;) pulse 100 in the morning, and 108—110 in the evening; no distinct remission of fever in the morning; exacerbations in the evening; slight tenderness on pressure over the epigastrium; the stupor changes to slight delirium in the evening; no petechiæ or sudamina on the body; urine scanty and high coloured; no evidence of inflammation to prohibit such a course of treatment.

On the 9th, I found the patient much better; tongue moist at the edges; expression of the countenance not so dull; a slight perspiration over the whole body; pulse 95, and soft.

Under this treatment the patient rapidly convalesced, and was discharged cured on the 1st of October.

REMARKS.—The four preceding cases very much resembled each other; they had been ill from six to ten days before coming to the hospital: two commenced improving on the 14th day of the disease, six days after admission: the other two, on the 15th day of the disease, eight days after admission; treatment the same.

I will now offer four cases as examples of the southern remittent fever, — the preceding cases having originated in this city.

Case V.—FREDERICK KNOWNES, aged 21, seaman, admitted into the New-York Hospital September 2d, 1836.

SYMPTOMS at the time of admission. The patient was conveyed to the hospital in a very debilitated and exhausted condition. Skin hot and dry; pulse 110 with some force; lies in bed upon his back, perfectly abandoned; countenance dejected; cheeks flushed; tongue swollen and covered with a dense whitish coat, moist, not red at the tip; epigastrium tender; no swelling or tenderness of the abdomen; some few sudamina on the neck and about the groin; no petechiæ; no nausea or vomiting; bowels loose from previous treatment; the cephalalgia, which was very severe yesterday, has entirely ceased to-day.

HISTORY.—This patient arrived from Mobile ten days before admission, and was attacked with fever three days after arriving in the city. Says he had violent chills, which were immediately followed by great heat and thirst, pain all over the body, and diarrhœa.

The captain of the vessel gave him a large quantity of brandy to drink, as he said to break the fever, supposing it to be a case of fever and ague; this only aggravated the disease, and the patient was brought to the hospital on the seventh day of the fever.

TREATMENT.—September 2d. Ten grains of Dover's powder at bedtime.

3d. Bowels not moved since last evening; not so restless; slept some; delirious in the night; spirit of Mindererus; gruel and arrowroot.

4th. Bowels moved 4 times in the night; dark offensive liquid stools; complains of pain in the bowels; cephalalgia more severe to-day; tongue has become dry and cracked; less fever towards noon, but no distinct interval of remission.

Directed 3 doses of Dover's powder during the day.

6th. Patient is somewhat better; the diarrhœa checked; extremely exhausted; pulse 110 and feeble; the stupor changes to delirium in the evening during the exacerbation of fever, which lasts until eleven or twelve o'clock in the night. Commence snakeroot tea with a more generous diet; rich soup and a little porter after each meal. This treatment was continued until 7th, when, there being but little improvement in the symptoms, Dr. Johnston directed quinine to be given; porter continued; spirit of Mindererus; a remission of fever this morning.

10th. Patient improving; continue the same treatment.

12th. Convalescing.

17th. Discharged cured.

Case VI.—PETER GRANT, aged 27, seaman, admitted September 2d, 1836.

SYMPTOMS.—Grant came into the hospital in a very feeble condition I

found him, two hours after admission, with the following symptoms : he lies upon his back ; face pale and dejected ; eyes suffused ; conjunctiva a little yellow ; skin exceedingly hot ; tongue coated with a brown fur, but moist ; lips pallid ; pulse 110, and irregular ; some subsultus at the wrist ; complains of aching pains in the back ; cephalalgia severe ; bowels regular ; urine small in quantity and turbid ; stupor, but easily aroused ; no eruption of any kind on the body.

HISTORY. — This patient had a slight bronchial affection for three or four weeks before the attack of fever ; he arrived from Savannah nine days before admission and was attacked with the fever the day after his arrival ; says he had some fever before leaving the port of Savannah, where the congestive fever (as they call it) raged to a considerable extent, but that it left him on the passage, and he was taken with it again the day after arriving in this port. During his illness, (eight days) took no medicine.

TREATMENT. — September 2d. The patient arrived in the hospital in the evening, when he was directed 10 grains of Dover's powder.

3d. Patient somewhat better this morning ; slept about three hours last night ; pulse this morning is calm, 98. Snakeroot tea as a drink ; gruel and arrowroot as diet ; bowels moved twice during the day ; free consistent evacuations.

4th. Symptoms the same ; spirit of Mindererus, and a more generous diet.

5th. Patient had a distinct remission of fever this morning ; tongue dry ; pain in the head the same. He was now directed half a grain of the sulphate of quinine every hour ; a little porter ; continue the snakeroot tea.

7th. Found the patient quite comfortable ; perspired freely during the night ; no pain in the head ; tongue moist ; same treatment continued.

12th. Convalescent.

On the 20th, this patient was attacked with slight pneumonia, which detained him in the hospital until the 26th of October.

Case VII. — WM. DARLEY, aged 23, seaman, admitted Sept. 3, 1836.

SYMPTOMS. — The patient lies upon his back much exhausted ; expression of the eyes and countenance, dull and heavy ; heat of skin ; determination to the head denoted by the following well-marked symptoms : flushed cheeks, burning heat, conjunctiva injected, severe pain across the forehead, sometimes darting pain in the head, mind confused, at times delirium.

Complains of pain in the back and limbs ; incessant thirst ; retching and vomiting of green bilious matter ; breathing hurried and laborious ; pulse 95 and somewhat tense ; abdomen distended, not tympanitic, but painful on pressure ; no kind of eruption on the body ; oppression at the præcordia ; tongue clean, pointed, and dry in the centre.

HISTORY. — This patient arrived in New-York on the 26th of August, and was attacked with remittent fever three days before admission. The attack was ushered in by a distinct chill, succeeded by flashes of heat ; no sweating ;

this was in the evening; the following morning, had another chill; says he has taken a dose of salts, which is all the medicine taken since the attack.

TREATMENT. — Sept. 3, 1836. — The medicine taken yesterday had operated freely upon the bowels, and the patient was directed immediately after admission 10 grains of Dover's powder; cold ablution to the head, and arrowroot as diet.

4th. Better this morning; slept most of the night, and perspired freely; bowels moved but once since taking the medicine; less pain and distress in the head; febrile excitement the same.

5th. Symptoms the same; exacerbation of fever last evening very severe; delirious all night; tongue remains dry and parched; complains of excessive pain in the back and legs.

Direct a bottle of porter to-day; snakeroot tea; spirit of Mindererus during the stage of excitement.

P. M. Bowels too loose; 10 grains of Dover's powder at bedtime.

6th. Symptoms the same — continue the same treatment.

8th. No abatement in the symptoms. Dr. Johnston now directed half a grain of sulphate of quinine every hour, with a more generous diet; effervescing draught during the exacerbation; cold water to the head.

10th. Patient somewhat better — same treatment.

12th. Convalescing.

Oct. 3d. Discharged cured.

Case VIII. — WM. BANKS, aged 19, seaman, admitted Sept. 7, 1836.

SYMPTOMS. — Banks was conveyed from the ship to the hospital, immediately after arriving in port, in a very prostrate condition, scarcely able to utter a syllable; lies upon his back perfectly abandoned; muttering delirium; great heat of skin; head and abdomen hotter than other parts of the body; countenance dull; lips and mouth dry and parched; tongue clean, dry, and pointed, red at the tip and edges; pulse 115, and very feeble; abdomen very sensitive to pressure; vomits green bilious matter; asks for cold water; sudamina about the neck and groins; urine turbid, with a brick-dust sediment; discharges from the bowels, thin, slimy, offensive, and of a dark colour.

HISTORY. — This patient was attacked with fever eight days before admission, on his passage from Wilmington, (N. C.) He had diarrhœa two days previous to the attack of fever, which has continued ever since; says he has taken no medicine.

TREATMENT. — Sept. 7, 1836. The patient was directed at bedtime 10 grains of Dover's powder, and 5 grains of calomel.

8th. Symptoms the same; Dover's powder repeated, spirit of Mindererus, and a generous diet.

9th. Patient somewhat better; discharges from the bowels checked; febrile excitement less, though no distinct remission of fever.

10th. Patient worse ; sordes about the teeth ; tongue dry and cracked ; eyes look glazed ; breathing is quicker and more anxious ; muttering delirium ; incessant thirst ; great tenderness of the epigastrium ; vomits as soon as anything is taken in the stomach ; ordered effervescing solution.

12th. Symptoms the same, except that the vomiting has ceased ; snakeroot-tea, beef-soup, and a little wine-whey.

14th. This morning, the 7th day since his admission, he commenced taking quinine in small doses ; wine-whey continued ; spirit of Mindererus.

15th. Found the patient better this morning ; same treatment continued.

16th. Still continues to improve ; skin soft and moist ; tongue begins to be moist.

18th. Convalescing.

26th. Discharged cured.

REMARKS. — The symptoms, treatment, and termination of the four last cases differ little from the four preceding ones. One commenced improving on the 11th day of the disease, one on the 14th, one on the 15th, and one on the 16th ; three were sick eight days before admission into the hospital, one only three days, and this one commenced improving on the 11th day of the disease. Whenever patients were brought to the hospital before the 5th or 6th day of the fever, convalescence commenced before the 15th day, unless the fever was complicated with some accidental lesion.

The following cases will illustrate the disease as it appeared later in the month. It is unnecessary to report each individual case, for in most of them it would be merely a repetition of symptoms and treatment.

Cases IX. & X. — PATRICK and DENNIS KEARL, twin-brothers, aged 20, admitted Sept. 23, 1836.

SYMPTOMS at the time of admission, 11th day of the fever. Not much prostration of strength, but great febrile excitement as manifested by the following symptoms in each, viz. : flushed face ; burning skin ; eyes glazed ; conjunctiva injected, and a little yellow ; cephalalgia very severe ; lips and mouth parched ; tongue moist, and coated with a thick, dirty, white fur ; incessant thirst ; asks for ice-water ; complains of aching pains in the back and limbs ; vertigo ; intellect dull ; loss of appetite ; vomiting of green bilious matter ; no eruption of any kind upon the body.

HISTORY. — These two brothers were attacked with fever eleven days before admission, while at work a few miles from the city, in a low, marshy district,

where fevers (intermittent and remittent) have prevailed for several years. They arrived from Ireland four weeks previous to the attack ; had drank freely ardent spirits, and had taken no medicine.

TREATMENT.—Sept. 23, 1836. Immediately after admission, they were directed the eccoprotic mixture, to be followed as soon as it had operated, by the spirit of Mindererus, a table-spoonful every hour.

24th. Febrile excitement increased; pain in the head very severe; pulse 110 and full; a remission of the fever towards noon.

Direct small quantity of the tartrate of antimony to be added to the spirit of Mindererus; diet of gruel and arrow-root.

25th. Patients a little better; same treatment continued.

26th. Give one grain quinine every other hour.

27th. Both patients somewhat better.

29th. Still improving.

Oct. 2d. Convalescing.

7th. Discharged cured.

Case XI. — ALEXANDER SUTHERLAND, aged 35, seaman, admitted Sept. 30, 1836.

SYMPTOMS at the time of admission. Extreme prostration; almost perfect coma; answers no questions; lies upon his back; pupils contracted; face flushed; sordes about the gums and tongue; desires constantly to pick his lips and tongue; pulls the bedclothes; high fever; pulse 110, and feeble; skin dry and hot, temperature of the head and abdomen greatest; subsultus tendinum at the wrist; no petechiæ or sudamina; can get no information as to the condition of his bowels or urine; symptoms altogether very unfavourable.

HISTORY.—The only information I could obtain from his shipmates was, that he was seized with the fever twelve days ago, on the passage from Savannah; that he had a chill, followed by great heat and feebleness; pain in the head and back; and that on the third day of the fever, he became delirious.

TREATMENT.—September 30th. The patient was ordered immediately after admission, wine whey, he could swallow but a few drops at a time; mustard sinapisms to the feet and epigastrium.

These means succeeded in a few hours in arousing him sufficiently to answer questions, and to swallow quite easily.

Oct. 1st. Better; slept about an hour; had a free alvine discharge; voids no urine; complains now of aching pains all over the body.

Direct snakeroot tea; a bottle of porter; the wine-whey continued; spirit of Mindererus during the exacerbation of fever.

P. M. Fever worse again, though not so much determination to the brain as at the time of admission.

2d. Patient somewhat better this morning; Dr. Johnston now directed me to

give him half a grain of the sulphate of quinine every hour in addition to his other remedies.

P. M. Exacerbation this evening less marked.

3d. Slept well last night ; feels better this morning ; pulse 98 and stronger. Same treatment.

4th. Better ; sordes about the mouth disappearing.

5th. Much better. Omit quinine and porter ; continued wine-whey.

10th Convalescing.

24th. Discharged cured.

REMARKS. — This was a case of great severity, with strong determination to the head, and portending a fatal termination. It furnishes a fair example of at least one quarter of the patients that are admitted during the months of September and October, into the Seaman's Hospital, of fevers contracted at the south.

The case illustrates, also, very forcibly, the benefit of the supporting plan of treatment, for here were symptoms that denoted great congestion of the brain, and of the abdominal viscera, and the treatment that naturally suggests itself, would be strictly antiphlogistic, if not depletory ; but not so to one well acquainted with the character of this disease ; his only object is to support the sinking energies of the system by equalising the circulation, and restoring the functions of the more vital organs, and thereby enabling his patient to rally under the disease. This he is aware cannot be done by any means which will destroy or diminish, in the least degree, the nervous energies of the system.

These are all the cases my limits will permit me to set forth in detail, but to illustrate the pathology of this fever it will be necessary to introduce the notes of the *post mortem* examinations, of those patients that died during the month of August.

It will be recollected that of forty-seven patients admitted into the hospital during the month of September, all recovered, and that of 94 patients admitted during the season, only 4 died, in two of which alone could *post mortem* examinations be obtained. The characteristic lesions of remittent fever cannot be ascertained from so small a number of autopsies, still we find from these that the mucous glands of the small intestines, which are so commonly ulcerated in typhoid fevers, were not in the least degree affected. We may also infer, not only from the autopsies of these two cases, but from the symptoms of most of the pa-

tients, that the stomach, liver, and spleen, suffer more in remittent fever than in typhus or typhoid.

Case XII.—DANIEL QUINLIN, aged 37, labourer, admitted August 19th, 1836.

SYMPTOMS.—Constant retching and vomiting, rejects every thing taken into the stomach; extreme pain and tenderness at the epigastrium; tongue clean and red at the tip and edges, in the centre it is smooth, the papillæ assuming a radiated appearance; great thirst; begs for water, but rejects it as soon as taken; the adnata deep yellow; skin somewhat yellow; very restless, tossing about in bed; skin hot and dry; pulse 110, and somewhat tense; cephalalgia; complains only of pain and distress at the stomach.

HISTORY.—This patient was attacked with fever at Yorkville, five days before admission; says that during his residence in this country, (two years,) he has had several attacks of fever, but none so severe as this; vomiting commenced the day following the attack, and has continued ever since.

TREATMENT.—This patient survived but three days after admission; medicine had no effect in controlling the vomiting. Leeches to the epigastrium, ice, milk and lime water, soda in its various forms, hot brandy toddy were resorted to, but with no effect.

AUTOPSY.—Eight hours after death.

HEAD.—The cavity of the cranium was carefully examined, but no traces of disease discovered.

CHEST.—The only lesion discovered in the chest, was congestion of the posterior inferior portion of the left lung.

ABDOMEN.—The stomach was found much diseased.

The mucous coat throughout its whole extent was of a bright red colour; no patches of inflammation as in some of the cases of typhoid fever.

The inflammation extended through the pylorus, along the duodenum, to the termination of the jejunum.

The Glands of Peyer were carefully examined and found in their normal condition; large intestines healthy; spleen enlarged, about eight inches broad, and seven long, of a dark blue colour, pulpy consistence, yielding, when cut, an abundance of black fluid blood, and crushed on slight pressure.

Liver somewhat larger than natural, hard and granulated, of a yellow colour, and containing very little blood.

Kidneys and mesenteric glands normal.

Case XIII.—CHARLES NICKERSON, aged 31, seaman, admitted August 27th, 1836.

SYMPTOMS.—Great prostration of strength; countenance expressive of deep distress; muttering delirium; answers no questions; cannot protrude the tongue;

sordes about the teeth and gums; eyes suffused; pupils contracted and immoveable; incessant thirst; appears to suffer great pain in the head and abdomen; epigastrium extremely tender to pressure; abdomen distended and tympanitic; flatness upon percussion over the liver and spleen, much greater than natural; skin hot and dry; urine of a bright red colour, and small in quantity; sudamina on the neck and groin; no petechiæ; pulse 106, irregular and thread-like.

HISTORY. — All I could learn in regard to this patient, was that he was attacked three weeks ago, on the passage from Savannah, and that he had taken no medicine.

The symptoms at the time of admission, very much resembled those of typhus fever; but the previous history of the patient as well as the more characteristic symptoms sufficiently distinguish it from that disease.

He died three days after admission into the Hospital.

AUTOPSY twelve hours after death.

The brain exhibited congestion of some of its larger vessels, but no traces of inflammation in any part of its substance.

CHEST. — Old adhesions of the pleura; right lung somewhat congested, left lung healthy.

ABDOMEN. — Here was discovered the principal lesion.

The mucous coat of the stomach inflamed, but not to so great an extent as in the preceding case; the inflammation appears to have commenced at the pyloric extremity of the stomach, and extended along the greater curvature. The duodenum and jejunum very much inflamed, but not ulcerated. *The glands of Peyer scarcely visible*; the isolated glands of Brunner prominent, but not inflamed. The large intestines filled with dark, thin, offensive fœces, and distended with gas.

SPLEEN about double its natural size, of a bright blue colour, and much softened.

LIVER hardened, but of its natural size; of a bright yellow colour, distinctly granulated, and containing little blood.

Kidneys and mesenteric glands normal.

REMARKS ON THE TREATMENT OF REMITTENT FEVER.

It appears from the treatment of the preceding cases, that *tonics* were the principal remedies employed. I am aware that tonics have been long given in the stage of convalescence from remittent fever; but the administration of wine, quinine, serpentaria and nourishing soup, to a patient with a dry harsh cracked tongue, dry hot skin, pulse one hundred and ten, severe aching

pains of the limbs, and delirium without any previous depletion, is a practice not so common. It is said that tonics should not be administered when the tongue is dry, and the skin hot and free from moisture, and when there is great pain in the head with a rapid pulse—in just such cases were wine, porter, and quinine given with the most gratifying results. The skin became soft and moist; the pulse more calm; the delirium subsided; the tongue immediately began to show that the mucous membranes were acted on, and that an altered state of the secretions was taking place. Tonics not only produced a gradual and permanent influence on the appetite and strength of the patient, but they produced an immediate impression. The improvement was sometimes so rapid as to be very remarkable from one day to the next.

A doubt may arise as to the propriety of using tonics in the early stage of the fever; they were used in all the stages, although at times disadvantages followed their employment; occasionally the quinine would irritate the stomach and increase the fever; if so, (which was rarely the case) the medicine was discontinued until the severity of the symptoms abated.

The *quinine* was always given in solution, and in small doses; if the excitement was great, the use of it was suspended in the evening.

Immediately after admission into the hospital, the patient's bowels were evacuated by some mild purgative, either rhubarb and magnesia, or castor oil; calomel was seldom employed. The following day, if there was a distinct remission of the fever and no local inflammation to prohibit it, the quinine was given; in most cases, it was not given before the third or fourth day after admission. It was usually continued until the stage of convalescence; together with the quinine was administered an infusion of the roots of the *aristolochia serpentaria*—an ounce to the pint of boiling water. This was given to the patients as a common drink in all stages of the fever. If too bitter and strong, it was diluted with cold water.

Porter was given in many cases with decided benefit, but if it produced diarrhœa it was at once suspended. *Wine-when* was given to all the patients that were admitted late in the disease with great prostration and exhaustion, even if the tongue was

perfectly dry and the gums covered with sordes; it was surprising to see the rapid improvement in such cases. When given in conjunction with porter, the quantity was about eight ounces daily, but as a temporary prescription to obviate extreme prostration, it was not restricted to this quantity. If care be taken to refrain from wine when there is acute inflammation of some organ, no inconvenience will result from its use.

The spirit of Mindererus was given in every case of fever as a sudorific; how far it had the desired effect, independent of the other remedies, I cannot say, as it was always given in conjunction with them.

The frequent *ablution of the head* and limbs with cold water was found very agreeable to the patients, and of a good deal of efficacy in equalizing the capillary circulation. Ice water to the head during the height of the fever, was one of the most useful remedies in abating the febrile excitement.

Anodynes were given with the most happy effect; nothing appeared to allay nervous irritability and restlessness so well as an anodyne; either ten grains of Dover's powder, or a few drops of the solution of sulphate of morphine. It quieted the patient, abated the delirium, and induced sleep. From the decided benefit that morphine produced in most cases, I should class it amongst the most useful remedies in remittent fever.

TYPHUS FEVER.

The twenty cases of typhus fever occurred among a large number of emigrants who arrived at New-York, from Ireland, in the latter part of May, 1836. They were landed from the two vessels, Garonne and Caravan; on board the Garonne were two hundred passengers, of whom two-thirds were sick with typhus fever, at the time the vessel arrived.

HISTORY AND CAUSES.—The history of these cases will truly entitle them to the name of ship fever. The Garonne and Caravan left Liverpool about the 20th of March, and arrived at Amboy (New-Jersey,) on the following 26th of May; the fever broke out before they had been at sea one month, attacking only the middle aged. During the voyage no provision was made for their comfort or attendance; confined to two apartments with

no ventilation, their provisions nearly exhausted and of bad quality, their clothes not changed during the whole voyage, which was unexpectedly protracted, it is not to be wondered at that typhus infection should be generated, for here were combined the most productive sources of the disease.

SYMPTOMS.—The first symptoms that manifested themselves on board the vessels, were great stupor, and total prostration of strength; cephalalgia; aching pains in the limbs, particularly in the small of the back and calves of the legs; incessant thirst, and heat of skin; loss of appetite; ringing in the ears, or deafness. The symptoms upon admission, varied very much in different cases, dependent upon the stage of the fever when brought into the hospital. I had an opportunity, however, of witnessing all the stages of the fever; also of seeing many patients treated in the city; who were attacked after they had landed; districts became infected with the fever, and the disease raged to a considerable extent in the months of June and July.

Throughout the course of the disease there was great determination of blood to the brain, and almost entire deafness during the stage of excitement; as that stage passed, the sense of hearing began to be restored. During the stage of excitement, which continued from eight to ten days, the patients were uncontrollable, raving with delirium, constantly muttering or talking, and extremely restless and sliding down in bed. After the eighth or ninth day from the commencement of the fever, *petechiæ* made their appearance, mostly upon the abdomen and chest; small red or purple spots, not elevated above the surface of the skin; these spots were different from the regular round rose-coloured spots seen in the ten cases of typhoid fever. The eruption of sudamina, or minute transparent vesicles was observed about the neck and groins, but this eruption was the same in typhoid fever, and in many of the severe cases of remittent fever. The cerebral symptoms were the most characteristic of typhus fever; stupor was perceptible from the time they were attacked with the disease, and continued until convalescence; when this stupor amounted to complete coma, the case terminated fatally: though deafness attended every case, the patient could be aroused by a loud tone of voice.

Subsultus was observed in most cases. The abdomen was not much affected by pressure, but a singular sensibility of the skin

existed which was observed in all the cases; the urine was high-coloured and scanty; the pulse varied from 90 to 120; when above 125 it was a fatal symptom.

TREATMENT.—As regards the treatment of these cases of typhus fever, we can arrive at no definite conclusion how far any remedy or class of remedies assisted either in diminishing the mortality, shortening the duration, or mitigating the severity of the disease; to do this, it would be requisite to note accurately the effect of remedies upon the course and termination of a great number of cases, and then compare them with other epidemics of the same disease. I can state, however, that in the twenty cases, notwithstanding every attention was paid them, every symptom closely watched, noted at the bedside, and met with corresponding treatment, the disease appeared to run a definite course. True, our remedies had a great effect in diminishing the severity of particular symptoms, and thereby materially increased the comfort of the patient. Most of the cases were complicated, with inflammation of some particular organ—the lungs and brain suffering most. These complications rendered the treatment strictly antiphlogistic; local bloodletting to the chest and temples was resorted to in most of the cases; cold water poured upon the head, always mitigated the cerebral symptoms, often arresting the delirium and inducing sleep, which was a very favourable symptom; blisters to the neck where the cerebral symptoms were violent, were also of decided efficacy in diminishing these symptoms; cathartics always prostrated the patient and aggravated the symptoms, as was evinced whenever calomel acted as a purge. Four cases out of the twenty were salivated, that is the gums were slightly touched—all four recovered, and more rapidly than the other cases.

The duration of the disease was much protracted, from the complication of inflammation developed during the course of the fever, and lasting after the fever had completely disappeared. Most of the cases were under treatment for about thirty days. Tonics were used only during the stage of convalescence, except in those cases that were not complicated with inflammation; in these, tonics were given as soon as the patients had escaped the violence of the disease and with a decided and rapid improvement; the tonic most employed, was the sulphate of quinine; the diet was a mild farinaceous one, with animal broth.

POST MORTEM APPEARANCES. — There was not the same uniformity of lesions observed in typhus fever, as in typhoid, or in remittent fever ; of six who died, five were examined ; one was carried away by the friends of the patient before an examination could be made.

HEAD. — The veins of the brain appeared much loaded with black blood, particularly on the external surface of the dura mater and in the sinuses ; the ventricles, in all the cases, contained some serum, but the greatest quantity was not more than two drachms ; in three cases, the tunica arachnoides was opaque and thickened. In one of the cases the medullary portion of the cerebrum was softened, and the arteries loaded with blood. When cut into, the blood ran over the scalp. This was ten hours after death.

THORAX. — The only lesion of importance observed in the chest, was in a patient who died of typhus fever and pneumonia, on the fourth day after admission into the hospital. Hepatisation had taken place in the inferior posterior portion of both lungs ; the superior portion of the right lung was much congested ; that of the left, healthy ; old adhesions.

ABDOMEN. — The liver and spleen were found in their normal condition, except in three cases where the liver was slightly softened. The mesenteric glands were healthy. The stomach and intestines were distended with gas, and in all the cases a softening of the mucous coat of the stomach was noticed ; in one case the finger could pass through the coats of the organ by the slightest pressure ; in three cases, the stomach contained slight patches of inflammation, about the size of a pea, of a bluish red colour.

The intestines were closely examined ; the *clustered glands of Peyer* were in every instance normal ; whereas, in the cases of typhoid fever, they were all more or less affected. In one case, in which dysentery existed, patches of inflammation were found in the large intestines ; in the other cases, the mucous coat was healthy.

TYPHOID FEVER.

The ten cases of typhoid fever will be found by examining the hospital register under the head of remittent fevers of a typhoid character, or, as two of them were registered, *synocha*.

The symptoms and anatomical lesions all resembled each other, but differed very materially from those of remittent and typhus fevers. It is the form of fever which is so common at Paris, and which has been studied with extreme accuracy by Louis and Chomel. Dr. Gerhard, of the Philadelphia Hospital, has given a very able report of the same fever, as witnessed by him during the summer of 1835 — 6, showing that the disease differs very much from true typhus, or typhus gravior, ship or jail fever ; also, showing from a number of cases examined after death, that the disease is identical with that witnessed at Paris, called typhoid fever, or typhoid affection, or from its anatomical characters, dothenenteritis, (all names belonging to one disease.) The *post mortem* examinations of the four cases that terminated fatally, were carefully noted, as were the symptoms, treatment, and history, previous to death. The anatomical lesions were the same in every case but one, differing, however, very much from those observed in typhus fevers.

It would be deviating too much from the original design of this report, to enter more minutely into the symptoms, history, and pathology of this fever ; therefore I will merely report two cases in full, which will sufficiently illustrate the disease as different from typhus fever.

Case XIV. — EDWARD GIBSON, aged 26, shoemaker, born in Penn., admitted June 16, 1836, with typhoid fever.

SYMPTOMS at the time of admission. Great prostration of strength ; skin hot, dry, and harsh ; pulse 100, and very feeble ; tongue dry, covered with a thick, brown, dirty looking coat ; lips dry and dark coloured ; the tongue red at the tip and edges ; temperature of the head and abdomen greater than that of any other part of the body ; the patient complains of no pain, but of soreness ; expression of the countenance is that of dejection and prostration ; intelligence rather dull ; cephalalgia slight ; no ringing in the ears as in typhus ; sleep disturbed ; no coma as in typhus ; liquid stools ; asks for cold water.

HISTORY. — The patient was not in a condition to give me any information of his previous history ; and the only information I could obtain from his friends was, that he was attacked, fourteen days previous to admission, with fever, while at work in the upper part of the city ; that he had taken but little medicine during his sickness ; that he was out of his mind every evening, but

somewhat better in the morning ; and that he was always considered a temperate man.

TREATMENT. — June 16. At bedtime the patient was directed to take 10 grains of calomel, and 10 grains of Dover's powder ; and the following morning to commence taking 2 grains of calomel every second hour, with a farinaceous diet.

18th. Two days after admission, the calomel was discontinued, the patient's mouth being slightly affected, and the spirit of Mindererus substituted ; discharges from the bowels, thick, black, pitch-like, and offensive ; exacerbations of fever in the evening ; tympanitis of abdomen.

19th. Camphor mixture — a table-spoonful every third hour ; borax gargle for the soreness of the mouth.

Patient is worse ; sordes in the mouth increased ; cannot protrude the tongue ; pulse 100 in the evening, and 90 in the morning ; less delirium in the morning, but no distinct remission of the fever.

20th. Substitute for the camphor mixture, 3 grains of camphor every third hour ; and as a drink, the seneka infusion. From this time to the 26th, the patient gradually improved, so that the exacerbations of fever in the evening became slight ; skin less hot, and the tongue clean and moist at the edges ; less delirium, pulse 90 ; evacuations from the bowels liquid, and of the same nature as on the 18th. This peculiar looking evacuation from the bowels I never witnessed in any case, except when I found ulceration of the intestines after death. From the 26th to the 6th of July, the patient became worse and worse ; the abdomen now extremely painful to pressure, pulse 110, and all the symptoms assuming a typhoid type. Tonics and stimulants were employed freely ; died on the 6th of July : the following were the *post mortem* appearances ten hours after death.

AUTOPSY. — The head was not examined, as it was necessary to finish the examination as soon as possible. The chest was found in a normal condition, except slight inflammation of the bronchial tubes.

ABDOMEN. — Gas in the stomach and bowels ; slight patches of inflammation near the pyloric extremity of the stomach ; no softening of the mucous coat.

Extensive ulceration of the glands of Peyer, commencing about three inches from the termination of the jejunum, and ending at the ileo-cæcal valve. At the middle of the jejunum, slight round patches of inflammation began to be visible ; at the end of this portion of the small intestines, a few of the glands of Brunner presented round elevated ulcers, slightly depressed in the centre but without hardened edges, as in the clustered glands of the ilium.

In the ilium, commencing at its upper extremity, were seen spots of merely slight thickening of the mucous coat ; then the glands became more prominent, red, with the centre a little depressed and ulcerated ; the ulcerations becoming broader and deeper and more numerous as they approached the ileo-cæcal valve ; the last ulcer was at least two inches in length, of an oblong shape ; all the ulcers, of any size, had a hardened base which appeared to extend deep into the cellular tissue ; their edges were elevated ; their surfaces were irreg-

ular, of a dark red colour, and surrounded with a dark, thick, pitch-like substance, like that which was evacuated from the bowels before death. Adhering to one of these large ulcers was a yellowish mass, apparently a slough of the mucous tissue. The mucous membrane, between the ulcers, was not much inflamed; but the cellular tissue, for about two to three lines around the ulcers, was thickened and inflamed.

The large intestines, containing the same kind of fœcal matter mentioned above, were distended with gas; the ascending portion of the colon was of a deep red colour; the remainder of the large intestines healthy.

The mesenteric glands, opposite the large ulcers, much larger than usual, and softened.

The spleen and liver were healthy.

Case XV.—WILLIAM BROWN, aged 24, seaman, admitted August 14th, 1836.

SYMPTOMS.—From the extreme prostration and exhaustion at the time of this patient's admission into the hospital, there was but little hope of a recovery. He lies upon his back with his legs drawn up upon the abdomen; peculiar expression of countenance not witnessed in any other case; deep livid hue of the lips; eyebrows contracted; expression of deep internal pain; great anxiety and restlessness—tossing about in bed but always keeping the legs flexed upon the abdomen; abdomen tympanitic, and painful upon pressure; bowels not moved in twenty-four hours; skin hot, dry, and harsh; pulse 120, and feeble; tongue a little moist at the tip and edges; not so red as in some other cases; delirious, but answers questions rationally; cephalalgia; says he cannot pass his urine, but has a constant desire to do so.

HISTORY.—This patient was attacked with fever at Wilmington, (N. C.) about three weeks before his admission; he took two doses of oil on the passage to New-York, which was all the remedial treatment he had before coming to the hospital; two days before admission he began to suffer pain in the abdomen, from that time he had no passage from his bowels; from the day he was first taken ill he could not raise himself up in bed; out of his mind every evening; thirsty.

The patient died the morning following his admission; a few hours before death he complained of great pain in the lower part of the abdomen, with a constant desire to pass water; the catheter was introduced but no water followed.

AUTOPSY.—Eight hours after death. The abdomen when laid open, presented the most extensive and acute inflammation I ever witnessed; the *peritoneum* covering all the viscera and lining the parietes of the abdomen was of a bright scarlet red colour; the most minute inspection could not detect a spot as large as a pea, free from inflammation; where it passed over the bladder it was somewhat ulcerated; the coats of this organ becoming involved in the general inflammation, accounted for the frequent desire to pass water before

death; no urine was found in the bladder, and but a small quantity in the kidneys.

The peritoneum, lining the intestines, was covered with a layer of lymph a quarter of an inch thick, and when scraped up with the palm of the hand filled a pint measure; about a quart of serosity and some fecal matter in the lower part of the peritoneal cavity.

The intestines were now examined; they were distended with gas, the colon containing black, thick, bilious, matter and the rectum a yellowish matter.

No inflammation in the small intestines except in the ileum, where about thirty ulcers were counted. Near the ileo-cæcal valve the isolated glands were ulcerated, forming regular, round, excavated ulcers; one of them the size of a large pea had ulcerated through the intestine allowing the escape of the feces which were found in the cavity of the peritoneum. This ulcer was two inches from the cæcal valve. Extending up the ileum were patches of large, elevated, rounded ulcers, occupying the *glands of Peyer*; many of them were an inch broad, composed of several smaller ulcers running into each other; the handle of the scalpel could easily be passed under these ulcers.

The ascending portion of the colon was inflamed but not ulcerated; *liver* enlarged and softened; *spleen* softened but not enlarged; *mesenteric* glands enlarged but not softened.

REMARKS. — The two preceding cases present examples of the characteristic lesion of typhoid fever. In the first case the ulcerations in the ilium were larger and more numerous than in the second, though in the second case, an ulcer had extended through all the coats of the intestine, so as to admit of the escape of feces. In both cases, and in all the cases of recovery, tympanitis was recognised by the great resonance on percussion; but a remarkable fact to be noticed in all the cases is that the severity of the abdominal symptoms was not equal to the extent of the lesions observed after death; the pain upon pressure is no more than that observed in remittent fever, when no ulcerations exist. Though there is no direct proportion between the severity of the symptoms and the extent of the lesion of these *glands of Peyer*, still we may calculate its presence with some degree of certainty.

INTERMITTENT FEVER.

I shall not attempt to give the history of the forty-seven cases of intermittent fever admitted during the five months embraced in this report. It will be sufficient to remark that thirty of these

cases occurred in Irish labourers employed in the immediate neighbourhood of the city; fifteen were sailors arriving with the disease from different ports; only two patients were attacked with the disease while residing in the city. More than two-thirds of the patients had been attacked before—some of them five or six times. The prevailing type of the disease was the tertian; there were but three patients affected with the quotidian type.

The treatment was the same in every case, and its success uniform, for no patient had more than two paroxysms of the fever after commencing it. Immediately after admission the patient was ordered a cathartic, commonly rhubarb and calomel; and the following day he commenced taking one grain of the sulphate of quinine every second hour, until just before the expected paroxysm, when he was ordered to take from 3 to 5 grains. If this treatment did not arrest the paroxysm, it was sure to mitigate its severity, and lessen its duration. The same treatment was repeated the following day. When the paroxysms were arrested, the patient was directed to take half a grain of the quinine every second hour for fourteen days. If this medicine was discontinued before this period, the disease would return in some instances, but the paroxysms would soon cease again on resuming its use.

Report of Cases illustrating the Treatment of FRACTURES of the EXTREMITIES by the Immovable Apparatus. By JOHN S. HEARD, M.D., and JAMES B. GOULD, M.D., late House Surgeons of the New-York Hospital.

It has long been a desideratum with surgeons to possess some apparatus for the treatment of fractures, more particularly of the lower extremity, which should combine the qualities of perfect adaptation to the limb, easy application, strength and lightness. In order to meet this want, the ingenuity of the profession has invented a variety of apparatus, but no one seems to unite so many advantages as the Immovable Apparatus of M. Suetin of Brussels: we say of M. Suetin, — for, although the principle of the apparatus may claim a higher antiquity, — to him belongs the credit of rescuing it from the oblivion to which it was so unworthily consigned, and of reducing it to its present state of perfection. This apparatus consists of the following parts, viz: — 1st. 5 or 6 rollers 6½ yards in length and 3 inches in breadth. 2d. 2 or more pasteboard splints. 3d. a quantity of starch, such as is used by washerwomen.

The method of applying this apparatus will be more readily understood by selecting a case of simple fracture of the leg, and detailing the various steps of the process.

The bones being reduced and held in coaptation, a roller is applied from the toes up to the knee; this is first to be thoroughly saturated with the starch, by means of a brush, or, what is better, the hands, rubbing it well in; the surface is then coated with a thick layer of the starch; a second roller is now applied and treated in a similar manner with the starch. Two splints of paste-board of sufficient length to extend from the knee to the sole of the foot, (under which they should pass) are to be moistened with warm water, and then saturated and coated with the starch; these are now to be applied, one on either side of the limb, being accurately moulded to the parts. Over these splints a third and fourth bandage is to be applied, saturated with

the starch like the two preceding.* The limb is now to be laid on the heel, on a pillow, and the apparatus allowed to dry and become hard, which it usually does in the course of from 48 to 72 hours: when this has taken place the patient may walk about with the aid of crutches.

The splints should be made of that kind of paste-board denominated *binder's board*, and should be cut out with a strong pair of scissors; they should have foot pieces extending from the heel to the toes; they should, also, have small triangular pieces cut out on the sides, one inch apart; these splints should nearly, but not quite, encircle the limb,—an interspace being left in order that if the apparatus should become loose from the subsidence of the swelling, or any other cause, they may be approximated by a bandage firmly applied over the whole apparatus. It may sometimes be necessary to apply two sets of splints, in which case the outer set need extend no lower than the ankle.

We shall now enumerate some of the advantages which this method of treating fractures possesses over all others:—1st. Its accurate adaptation to the limb. 2d. Its lightness combined with strength. 3d. Its cheapness and the facility with which it can be obtained. 4th. Its easy application. 5th. Its comfort to the patient. 6th. The exemption it affords the patient from ulceration of the heel, by no means an uncommon occurrence with the ordinary fracture box. 7th. The freedom of motion it allows the patient; his health not suffering from confinement to bed, and to one position for from 6 to 8 weeks, or even a longer period. 8th. It obviates the necessity of those repeated adjustments so necessary in other methods. The surgeon may rest satisfied that all will go right.

These advantages are certainly sufficient to give the preference to this apparatus over all others now in use. There are certain cautions to be observed in the application of this apparatus; if there be much swelling with heat and pain in the limb, it will be best to delay the application until these shall have, in a measure, subsided; that passive swelling, so to speak, which remains after the subsidence of the inflammation being readily removed by the apparatus. In applying the bandages, great

* Sometimes it may be well to apply one or two more bandages.

care should be taken to have the pressure equable from the toes to the knee.

We shall now give some cases of fracture, illustrating this method of treatment:—

No. 1. Simple fracture of the leg.—WILLIAM STIVISON, born in Ireland, aged 28, a labourer, was admitted into ward No. 2, of the New-York Hospital, December 1st, 1838, with fracture of both bones of the leg about the middle; the injury was the result of a blow about an hour previous to admission. The limb was placed on the heel on a pillow, and lot. evap. applied.

December 7th. The swelling having subsided, the immovable apparatus was applied.

December 10th. Apparatus dry and firm; is walking about with crutches.

January 12th. Apparatus removed; union firm; no deformity.

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No. 2. Simple fracture of the leg.—JOHN GILLEN, born in Ireland, aged 30, a labourer, was admitted into Ward No. 14, of the New-York Hospital, Dec. 3d. 1838, with a simple fracture of both bones of the leg, about 3 inches above the ankle joint; he had, a few hours before his admission while intoxicated, fallen down into a cellar. The limb was placed in a double inclined plane, and lot. evap. applied.

December 8th. Swelling in a great measure subsided; immovable apparatus applied.

December 11th. Apparatus hard and dry; walks with the aid of crutches.

January 3d. Apparatus removed; union firm; no deformity.

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No. 3. Simple fracture of the arm.—EDWARD WALLIS, born in Ireland, aged 30, a cartman, was admitted into Ward No. 10, New-York Hospital, December 6th, 1838. Ten days previous to his admission, in endeavouring to stop his horse that had run away, he was thrown down, and the wheel, passing over his right arm, fractured the os brachii about its middle; splints and bandages had been applied, but the pressure seems to have been unequal; he complains of great pain, and upon removing them after admission, there was found considerable tumefaction, especially at the elbow; the arm was laid in a flexed position upon a pillow, and lot. evap. applied.

December 10th. Swelling has mostly subsided; immovable apparatus applied.

January 8th. Apparatus removed; union perfect; elbow stiff; passive motion ordered.

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No. 4. *Compound fracture with delirium tremens.*—CHARLES MILLER, born in New-York, aged 37, a seaman, was admitted into Ward No. 3, Marine Department, December 15th, 1838. About an hour previous to admission his right leg became entangled in machinery, by which a compound comminuted fracture of the tibia and a simple fracture of the fibula were produced; the seat of fracture being at the junction of the lower and middle third of the leg; there was a lacerated wound of the integuments about 2 inches in extent, through which the lower end of the tibia protruded for 2 inches; the bones were reduced, and the wound dressed with adhesive straps and lint; the leg was now extended upon a straight splint, the thigh being firmly lashed to the upper part, and the foot secured to the foot piece; lot. evap. applied.

This man was addicted to the intemperate use of ardent spirits, and was soon attacked with symptoms of delirium tremens, and in his raving threw the limb and splint violently about, so that it was almost impossible to keep any kind of splint attached, or the bones *in situ*;—with a view to accomplish these two ends, Amesbury's apparatus was applied, but it was found impossible to keep it on from the violence of the patient. His health had now suffered materially, and his heel had ulcerated from the pressure requisite to keep the limb attached to the splint; the wound had become unhealthy and was sloughing; the ends of the tibia were also necrosed.

January 9th. It being doubtful whether the life of the patient, much less his limb, could be saved, it was determined to apply the starched apparatus.

The wound was dressed with lint smeared with ung. bals. Peru.; over this was laid a piece of sheet lead, 2 sets of splints and 6 bandages were applied.

January 12th. Apparatus dry, a piece was cut out over the ulcerated heel, in order that daily dressing might be made; he now walks about, and thus the farther spread of his bed sores is stayed; under a generous and stimulating diet, his health improved, and all traces of delirium vanished; says he feels decidedly comfortable since the application of the apparatus.

February 6th. The apparatus having become saturated with the profuse discharge from the wound and extremely offensive, was to day removed; the limb was found in the following condition: union had taken place, but was not firm; the wound is healthy and contracted to about one third its former size, and is covered with exuberant granulations; a new set of the apparatus was applied, the ulcer having been freely brushed over with nit. argent: when the apparatus had become dry, a small piece was cut out over the ulcer in front, in order to allow the pus to drain off.

March 2d. Apparatus again removed on account of the sheet lead having worked down upon the instep, and there causing irritation; the union was found to be firm, and the ulcer connected with the fracture all but healed; several small pieces of bone were removed; ulcer on heel healed for some time; for safety's sake, 2 side splints of Amesbury's apparatus were applied to the leg.

ALFRED C. POST, M.D.
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No. 5. Simple fracture of the leg.—MARY MCCREADY, born in Ireland, aged 30, was admitted into Ward No. 5, New-York Hospital, December 20th, 1838, having fallen from a ladder a few hours previous to her admission, and fractured her right leg, about 2 inches above the ankle joint. There was considerable swelling with pain in the limb; it was placed in a fracture box, and lot. evap. cum tinct. opii applied.

December 25th. The swelling has subsided in a great measure and the pain ceased; starched apparatus applied, and as soon as it became dry and hard she walked with crutches.

January 22d. Apparatus removed; union firm; no deformity; some swelling; limbs bandaged.

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No. 6. Simple fracture of the leg.—MARIA SMITH, born in Ireland, aged 30, was admitted into Ward No. 5, New-York Hospital, Dec. 26th, 1838, having just fallen down on the ice and fractured her right leg about the junction of the lower and middle third. There was considerable pain in the limb, but not much swelling; it was placed on a pillow on the heel, and lot. evap. cum tinct. opii applied.

December 30th. Pain has ceased; some swelling; starched apparatus applied.

February 6th. Apparatus removed; union perfect; no deformity.

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No. 7. Compound fracture of the leg.—HENRY A. ADAMS, born in New-York, aged 12, was admitted into Ward No. 10, New-York Hospital, January 2d, 1839. Two hours prior to his admission, he was run over by a hose-cart and his right leg fractured by the wheel passing over it. There was a compound fracture of the fibula, the external wound being, however, slight; and a simple fracture of the tibia at its middle. Although there was but little swelling, he complained of great pain; the limb was placed in a fracture-box, and compresses were applied, wet with tinct. opii.

January 3d. Twenty-two hours after the receipt of the injury, the immovable apparatus was applied, giving immediate relief from pain; in 48 hours he was walking about by the aid of crutches.

January 31st. To-day, removed the apparatus; the union is perfect.

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No. 8. Simple fracture of the leg.—MARGARET BEHEAN, born in Ireland, aged 36, was admitted into Ward No. 5, New-York Hospital, January 13th. This morning she fell down, and her left leg passed through a grating in the side-

walk, by which it was fractured about two inches above the ankle. Some swelling and pain; the limb was placed upon a pillow on the heel, and lot. evap. cum tinct. opii applied.

Twelve hours after the injury, the limb being still somewhat swollen, the immovable apparatus was applied.

January 16th. Complaining to-day of severe pain; removed the apparatus; slight vesications; apparatus re-applied; after this became dry; she had no pain.

March 3d. Apparatus removed; union firm.

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No. 9. Simple fracture of the leg. — CHARLES HEALY, born in Ireland, aged 52, a labourer, was admitted into Ward No. 2, New-York Hospital, Jan. 30th, 1839. About a year ago, this man fell and fractured his left leg just below the middle; this united with some deformity, the lower end of the upper fragment projecting so as to be quite prominent. On the day of his admission, he fell down stairs, and again fractured his leg just below the seat of the old fracture; the limb was placed on a pillow, on the heel.

January 31st. Immovable apparatus applied, a fold of lint being placed just below the projection.

March 14th. Apparatus removed; union not firm; apparatus reapplied.

March 28th. Again removed apparatus; union is more perfect.

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No. 10. Simple fracture of the tibia. — JOHN YOUNG, born in New-York, aged 19, a seaman, was admitted into Ward No. 5, Marine Department, January 31st, with a simple fracture of the tibia about its middle, caused by his leg being jammed between the dock and a vessel, two days previous to his admission. There was great pain and considerable swelling; limb laid on the side on a pillow, and warm emollient poultices applied.

February 6th. The immovable apparatus was applied.

March 3d. Apparatus removed; union perfect.

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No. 11. Simple fracture of the fibula. — WM. LATE, born in Maine, aged 34, a seaman, was admitted into Ward No. 3, Marine Department, February 4th, 1839. Two hours previous, a bale of cotton fell on his left leg and fractured his fibula about an inch above the malleolus externus; placed the limb on the side on a pillow, and applied lot. evap.

February 6th. Immovable apparatus applied.

March 4th. Apparatus removed; union firm.

ALFRED C. POST, M.D.

Attending Surgeon.

No. 12. Simple fracture of the leg. — JOHN DERRICK, born in Ireland, aged 18, a labourer, was admitted into Ward No. 9, New-York Hospital, Feb. 8th. Three days before his admission, while assisting at a fire, he was knocked down, and his left leg fractured at the junction of the lower and middle third; there was some swelling and displacement; the limb was placed on a pillow and lot. evap. applied.

February 18th. Immovable apparatus applied.

March 21st. Apparatus removed; union perfect.

JOHN C. CHEESMAN, M.D.

Attending Surgeon.

No. 13. Simple fracture of the leg. — MICHAEL BOYCE, born in Ireland, aged 28, a labourer, was admitted into Ward No. 2, New-York Hospital, Feb. 18th. Three days before, a bank of earth caved in and buried him beneath it; by this accident his right leg was fractured about the middle; placed the limb, which was slightly swollen, on a pillow.

February 19th. Immovable apparatus applied.

March 29th. Apparatus removed; union perfect.

ALFRED C. POST, M.D.

Attending Surgeon.

No. 14. Simple fracture of the leg. — THEODORE SCHIEFFIN, born in New-York, aged 32, a seaman, was admitted into Ward No. 3, Marine Department, February 23d, with a fracture of both bones of the right leg, about the middle; the injury was caused by a fall a few hours previous; placed the limb on a pillow.

February 24th. Immovable apparatus applied.

April 1st. Apparatus removed; union not very firm; apparatus reapplied.

April 15th. Apparatus again removed; union is perfect.

ALFRED C. POST, M.D.

Attending Surgeon.

Researches on the Tubercular Disease of the Bones. By A. NELATON, M.D. Translated from the French, by CHARLES R. KING, M.D.

THE tubercular disease of the bones, known in almost all times by some physicians, but unsuspected by the greater number, is one of those diseases of which we would in vain seek a description in the dogmatic treatises on surgery. Indicated rather than described, under twenty different names, and confounded with most of the alterations of the bony tissue, most especially with caries, it has been sought to be explained by the theories of each period, rather than made the object of researches calculated to discover its essential character.

What has been done by Bayle and Laennec for the lungs, (the description of the natural history of tubercular development,) remains almost entirely to be done for the bony tissue. It is this point of the pathology of the bone that I have sought to treat, specially, in this paper.

In the bones, as in the lungs, the tubercular affection presents itself under two very different forms; sometimes, the tubercular matter is found collected in one or more nuclei, hollowed in the thickness of the bony tissue; (*encysted tubercles*;) sometimes it is infiltrated into the cellules of the spongy tissue; (*tubercular infiltration*.) It will be seen, hereafter, that this distinction of two varieties, is a capital point in the history of the disease under consideration; so that without a special study of each of these forms, it is impossible to comprehend the principal phenomena it presents.

These two forms offer anatomical peculiarities, which may serve to distinguish them at all periods of the disease, so that it is always easy, whatever the degree of alteration in the tissues, to pronounce upon the nature of the organic lesions, and to determine the variety.

Section 1st. FIRST FORM.—Encysted Tubercles. This variety alone has occupied the attention of authors.

When we examine a crude tubercle of the bony tissue, at the

period of full developement, we observe the following: in the midst of the bony tissue, generally in the cellular structure, a cavity presents itself, enclosed on all sides, and containing an opaque yellowish-white matter, very nearly resembling putty. This is inelastic, as superficial depressions made with the finger do not disappear when pressure is removed; it contains not a particle of bone, (unless some complication exists,) and presents, sometimes, streaks of a white or slightly grayish colour; it is not formed of concentric layers, is suspended without dissolving in water, so as to present flocculi floating at first in the liquid, but soon sinking to the bottom of the vessel. I have been unable to ascertain, satisfactorily, whether or not this matter be perfectly similar, in chemical composition, with that of tubercles in other organs, as the lungs, brain, &c.; whether it contains a larger proportion of phosphate of lime.

This matter is contained in a cyst, which lines all the irregularities of the tubercular cavity. The cyst is not thick, (about a quarter of a line.) is at first gelatinous and transparent, but in the end becomes very much more resistant. Examined internally, after its contents are removed, it is white, irregular, flocculent, and combined, as it were, with a portion of the tubercular matter, which cannot be removed without difficulty. Externally, it is often of a rose colour, occasioned by a vascular net-work upon its surface, the number of the vessels appearing always in proportion to the degree of softening of the tubercle. From this net-work, a number of vascular prolongations penetrate into the cells of the bony tissue, establishing an adherence, easily destroyed, between the cyst and the walls of the cavity containing it.

After several days maceration in water or alcohol, the cyst is found to be formed of white, fibrous, inextensible filaments, interlaced in every direction, as it were, felted together, and representing somewhat the texture of articular capsules.

The excavation formed in the substance of the bone by the accidental tubercular production, may be limited on all sides by bony walls; this is the most simple, as well as most frequent disposition, at the commencement of the disease. The cavity is then more or less regularly round, sometimes anfractuous, with several other cavities or appendices opening into the central one.

Its surface is, in general, rather smooth ; sometimes a number of extremely delicate bony spiculæ, almost all parallel, are observed, directed towards the centre of the cavity, and recalling the disposition of the papillæ on the tongues of certain carnivorous animals, as the cat, the tiger, &c.; while at other times, the parietes are formed by heterogeneous tissues, such as the bony, fibrous, and cartilaginous. This is the case, when, in the course of its developement, the tubercle has reached the surface of the bone. The cavity of the tubercle, at the point corresponding to the perforation of the external layer, is formed by the hypertrophied periosteum, intimately adhering to the cyst. When the tubercle develops itself in the neighbourhood of the cartilaginous partition, separating the epiphyses from the diaphysis before the junction of these two, this partition may be perforated, a condition quite often observed. We find, then, near the middle of the excavation, a cartilaginous ring strongly attached to the envelope of the accidental production. We shall have occasion, hereafter, to cite several examples of an analogous disposition.

No remarkable change is seen in the bony tissue surrounding the tubercular excavation; a slight injection only is noticed, forming a ring about a line in depth, a disposition that can only be well ascertained upon the epiphyses of the long bones, and in adults alone; for in children, the spongy tissue entering into the formation of all the bones of the skeleton, and in adults, all that we meet with in the bones of the trunk, present in the normal condition, an intensely red colour. Besides, this tissue preserves its normal density and texture. A careful examination of the disposition of the bony fibres or columns near the parietes of the cavity, shows that these fibres have preserved their position; that those, which by their direction should traverse the cavity, are suddenly interrupted at its surface; in a word, we have before us an excavation, not the result of the displacement of the surrounding tissue, but of an actual loss of substance, such as would be occasioned by a cutting instrument.

The cartilaginous and fibrous tissues encountered by the tubercle in its developement, are liable to a similar destruction. I have in my possession a specimen representing an excavation, formed at the expense of the third and fourth lumbar vertebræ; it was filled with crude tubercular matter, contained in a cyst;

the fibro-cartilage separating these two vertebræ, corresponds nearly to the middle of the cavity in height; its two posterior thirds have entirely disappeared, while the anterior third is entire, and has preserved its pearl-white aspect; it is formed of fibres which all stop at the surface of the cyst, and their extremities are all seen as clearly interrupted there, as if they had been cut with a very sharp instrument.

These tubercular collections vary in extent from two or three, to fifteen or twenty lines in diameter. They are not, in general, very numerous, it being more common to meet with one rather large cavity, than several of smaller dimensions.

We will now examine the modifications of the surrounding parts occasioned by the presence of a tubercle. When a tubercle is developed in a bone, the periosteum and superficial layers of the bone undergo important changes; the periosteum becomes more vascular, as does also the surface of the bone, in the part nearest to the accidental formation; this increased vascularity is soon followed by a deposition of new bony layers, which accumulate successively, and are always easily distinguished from the old bone, as they never present the fibrous appearance observed in the primitive bony tissue; indeed, this peculiarity of the bony depositions does not belong exclusively to the affection under consideration. It is the especial characteristic of all bony tissues of secondary formation, at least, for several years after its development; as for instance, in callus, in bones replacing eliminated sequestra, and in bony vegetations surrounding a diseased articulation. These depositions of bone are only formed in parts covered by periosteum: thus, when a tubercle is developed in the epiphyses of a long bone, the humerus, for example, the bony incrustations cease at the circumference of that portion of the bone covered by the diarthrodial cartilage; and to anticipate a little, this is one of the reasons, why tubercles developed near the extremity of the bone, open more easily into the articular cavity, than upon the surface of the bone, whose periphery seems, as it were, to retire in proportion as the tubercle grows; for after having passed through all the primitive osseous tissue, it must still traverse the layers of secondary formation, while, towards the articulation, no analogous obstacle is encountered.

It is by the deposition of these new bony layers, that the

growth of the extremities of the bones takes place. Nothing is more easy than to ascertain this fact; and it is difficult to understand how Mr. Russell, cited by S. Cooper, can have said, that he had never seen himself, nor had any one ever shown him in white swelling, the extremity of a bone more voluminous than that of the corresponding bone on the opposite side.

Such is the tubercular affection indicated by *Traugott Gerber, Frederick Haacke, Delpech, and M. Nichet*.^{*} But is it not possible, to recognise anatomically, this lesion before it has reached this degree of developement, to perceive the point of departure of the organic alteration, or, so to speak, the elementary lesion? In a soft spongy tissue like the lungs, where simple pressure with the hand will indicate to us a more resisting spot, and thus direct our researches, it is easy to recognise the first rudiments of the tubercular affection; this, however, is not the case with the bones, which conceal within them the morbid alterations and thus protect them from our means of investigation. Besides, we can easily conceive that anatomical lesions of some delicacy, contained within a structure that can only be divided by a saw or rather dull instruments, may be easily destroyed by the very manœuvre employed in searching for them. The following precautions, should, therefore, be taken, when we desire to ascertain the presence of incipient tubercles in a bone.

Having removed the periosteum, observe if the surface presents some points more vascular than others, forming spots marbled with violet; see, at the same time, if there is not some prominence, no matter how slight, changing the natural shape of the bone. If either of these conditions are met with, remove by means of a saw the thickest shell of the bone, and then progressively destroy the cellular structure with the extremity of a strong scalpel, so as to carve out, as it were, the tissue around the organic lesion.

By following this process, I have been enabled several times to ascertain, that tubercles in the bones, as those in the lungs, have their commencement in the *semi-transparent gray granulation* described by *Laennec, Louis, &c.* I have in my possession, a

^{*} Memoir sur la Nature et la Traitement, du Mal Vertébral de Pott. Par M. Nichet, Chirurgien de l'Hôpital de Charité de Lyon. 1835.

specimen of the superior extremity of the femur, offering a beautiful example of these tubercular granulations. In the centre of the spongy tissue occupying the base of the great trochanter, is a mass six or seven lines in extent in every direction, formed by the conjunction of small pearly granulations, half a line in diameter, and of a white opaline colour. Several of these granulations, especially those situated at the periphery, are surrounded by a small bony shell, so delicate and transparent, that at first sight it is not perceived; it is only recognised by its resistance to the point of a needle, with which an attempt is made to pierce it. Some of them have in their centre a yellow opaque point, indicating a commencing transformation. In the interstices which separate them, some very delicate vessels creep along to join themselves with those of the surrounding bony tissue, upon which a very apparent injection is observed. The surface of the bone, at the point nearest this tubercular deposit, is covered by a bony layer of secondary formation; and presents besides, an evident increase of vascularity.

When we consider that these granulations are perfectly identical with the gray granulations, generally regarded as the rudiments of pulmonary tubercles; that they are ordinarily met with in bones which, in other portions of their extent, offer veritable tubercles, and in subjects, whose lungs also contain them; and that they are not observed under opposite circumstances, we shall be authorized, I think, to conclude that *in the bones as in the lungs, the crude tubercle proceeds from the gray granulation.*

The bony partition that separates each of these granulations, thinned at first by absorption, soon entirely disappears; a cyst analogous to that which forms around every foreign body enclosed within our tissues, envelopes the whole mass, which then presents all the characteristics already indicated in treating of the crude tubercle. Having reached this stage, the tubercle continues to increase; I have never remarked that its development was arrested; it is only retarded by the difference of density, or nature of the tissues encountered. In a short time the matter contained in the cyst becomes softened; this softening, proceeding sometimes regularly from the centre to the circumference, sometimes from a point in the circumference, thence

extending throughout the mass. The collection of tubercular matter then acts as a veritable abscess; it follows the cellular interstices of the organ until it arrives under the integuments, which become inflamed, are then perforated, and allow the discharge of a grumous liquid, consisting of white cheesy floculi, suspended in a turbid serum. When all this matter is evacuated, there remains a fistula, giving passage, daily, to a variable quantity of sero-purulent liquid.

One circumstance, however, must be borne in mind; that the bottom of the fistula corresponds with the tubercular excavation in the tissue of the bone, and that the parietes of this excavation, supported on all sides by a solid structure, cannot contract themselves, nor come in contact with each other, as the soft and pliable walls of an abscess formed in other tissues; a disposition which, as it opposes the coming together of the parietes of the cavity, tends to keep up the discharge from the fistulous opening.

An action essentially reparative then commences, tending to fill up the void which has been formed in the interior of the bone; the cyst that enveloped the tubercular matter, and whose vascularity has gradually increased during the process of softening, becomes considerably enlarged, and is so thickened and hypertrophied as, at length, to fill completely the cavity it had lined; it then presents the most marked analogy of structure, with the fleshy granulations upon the surface of a wound; a large number of extremely delicate vessels, nearly all parallel, are observed on it converging towards the centre of the cavity. This tissue, like that of cicatrices, gradually loses its vascularity, and in the end, presents, in every respect, the appearance of fibrous tissue, (*tissu fibreux inodulaire.*) Such is the most favourable termination of the disease under consideration: but to obtain it, the reunion of certain conditions is indispensable. These may be all summed up in the following: the tubercular matter must find an easy outlet for its evacuation. Thus, all other things being equal, the disease will have the greater tendency to this termination, in proportion as its primitive seat shall be nearer to the cutaneous surface. In fact, it is very often observed in cases of tubercles developed in the phalanges, and in the bones of the metacarpus and metatarsus.

If, on the other hand, the tubercular matter is compelled, in order to reach the surface, to traverse a considerable space, it progressively accumulates; a cellular fibrous cyst, resembling a flask with its neck accurately fitted to the perforation in the bone, receives all the tubercular matter secreted, and prevents its diffusion through the cellular tissues. No more accurate idea of the aspect of these cysts, thus suspended by a pedicle to the bone, could be given, than by comparing them to large leeches gorged with blood, and attached by their mouths to the surface of the skin. Indeed this comparison, which might perhaps seem a little extravagant, is so true, that it very rarely fails to present itself to the minds of all to whom these cysts are shown.

Not unfrequently, we meet with tubercular pouches, extending from the dorsal region down to the small trochanter, limited below by the insertion of the psoas and iliacus muscles. In such cases, they present alternate contractions and dilatations, accordingly as they are more or less compressed by the surrounding parts: sometimes, when the tubercular matter is slowly secreted, and especially when its formation is suspended, these contractions become more and more marked; the canal which traversed them at first, contracts, and is finally obliterated entirely, so as to isolate a portion of the cavity from its point of origin. This tubercular mass might then appear to have been always independent of the disease of the bone, but a little examination will easily detect the contrary. In all such cases that have come under my observation, I have always found these tubercular masses attached to the principal cavity by a fibrous cord, occupying the place of the canal, which had communicated between them.

These depositions may be entirely absorbed, as the fibrinous collections after extravasations of blood are seen to be removed.

They may cause a suppuration in the parietes of the cyst and the surrounding parts, and a true *caries*.

New tubercles are sometimes observed to develop themselves, and to grow in the very parietes of the tubercular cyst.

To recapitulate: the essential characteristic of this variety of tubercular disease is to produce in the bones excavations and destruction of tissues, without leaving any remains either of the

bones, or of the cartilages, &c. In what way is this destruction accomplished? This question touches too closely upon the search after first causes, ever to be decided in a rigorous manner. We can only point out the principal circumstances attendant on this work of destruction, without establishing by conjecture its intimate nature. *M. Nichet* expresses himself on this point, as follows: "There is then nothing observed there but a wearing away, (*usure*,) an erosion of the vertebræ by a foreign body, and that foreign body is the scrofulous tubercle. This destruction seems to have been occasioned without inflammation, and by the mere fact of the position of the tubercular matter, and by the pressure exerted by it upon the bone."

This destruction is analogous to that occasioned in a bone by the constant pressure of a tumour developed in its neighbourhood, and to the depression formed by the arteries, in a normal state, upon the bones; such as that observed upon the femur along the track of the crural artery, upon the bones of the cranium over the meningeal arteries, and upon the thoracic portion of the spinal column in contact with the aorta.*

The arterial furrows, says *Meckel*, are manifestly occasioned by the continual pulsation of the vessel, which, on the one hand, render absorption more active, and on the other, prevent the deposition of new nutritious matter. (*Meckel*, *Anat. Gen.* vol. i. p. 236.)

Section II.—SECOND FORM. Tubercular Infiltration. *M. Nichet* has hinted at this form of tubercular disease, but has not investigated it in a special manner; he merely says, in some of

* I am aware that this mode of accounting for the lateral curvature of the vertebral column is not admitted by all, particularly since the explanation of it by *Bichat*, and the confirmation which *Beclard* appears to have given to this latter view, in calling attention to the alleged fact, that in left-handed persons the lateral curvature is transposed. Notwithstanding all the circumspection inspired by such respectable authorities, I cannot avoid remarking, that if this lateral inclination resulted from the habit of inclining the vertebral column to the left in raising burthens with the right arm, the curvature would be found precisely at the point where the column is bent during this movement, that is, in the lumbar region, and not in the dorsal, which enjoys but very slight movements of lateral flexion. If we recollect, besides, that *M. Cruvelhier* says that he has met with this lateral inclination in the fœtus before the full time, and if we consider the want of symmetry in the dorsal vertebræ, corresponding to the most curved portion of the column, there can be no hesitation, I think, in regarding the pressure occasioned by the aorta as the cause of this curvature.

his observations, that a cheesy looking matter appeared infiltrated into the cells of the spongy tissue, without seeking to ascertain what series of phenomena resulted from this infiltration, either in its relation with pathological anatomy, or in connection with local or functional symptoms, or as regards the therapeutic indications furnished by it. Everywhere in his memoir, this variety of the tubercular disease of the bones is confounded with that of which I have just exposed the characteristic signs. This is indeed, in my opinion, the only capital reproach that can be made against the work of *M. Nichet*; it is the source of several inaccurate interpretations of facts observed and of some of the errors recorded in his conclusions.

The tubercular infiltration may present itself alone, or connected with the first variety I have described, but never succeeds it; it is met with under two different conditions, which may be considered as two degrees of the same form, and designated by the names *semi-transparent infiltration*, and *puriform*, or *opaque infiltration*.

The semi-transparent infiltration presents itself under the aspect of gray, opaline, slightly rosy, and semi-transparent spots, formed by the deposition in the cells of the bone of a substance analogous in appearance to encephaloid matter; and, indeed, I have several times seen this condition of the bones, and especially of the bodies of the vertebræ, mistaken for a cancerous degeneration. The tints observed in these spots, do not pass insensibly into that of the bony tissue around them; their circumference is clearly defined by a sudden change of colour. A stream of water directed into the cells of the spongy structure, does not force out the infiltrated matter, which adheres firmly to the lamina of that tissue. Such, however, is not, as we shall see, the case at a later period of the disease. Examined with a lens, these spots exhibit in their interior very minute blood-vessels traversing it in every direction, and sometimes surrounded by a well marked circle of injection. No change is observed in the density of the bony tissue, which is neither augmented nor diminished. If we examine a bone thus infiltrated, after having macerated it, in order to remove the matter obstructing its cells, or after having burned it upon live coals, to remove the bony network properly so called, no remarkable change is

noticed in the texture of the bone, and it would be impossible then, even to suspect the disease which had been recognised in the bone before maceration.

To the semi-transparent infiltration succeeds the puriform;—this is distinguished from the preceding: 1st, by the dull yellow tint of the infiltrated portions; 2d, by the absence of blood-vessels; 3d, by the interstitial hypertrophy of the bony tissues. Let us examine separately each of these three points.

1st. The matter infiltrated into the cells of the bone, is of a pale yellow colour, and perfectly opaque; at first rather firm, it gradually softens and becomes completely puriform; in this condition it may be driven out by a stream of water directed into the cells of the bones. Besides, the spots of infiltrated matter are as well defined as in the preceding case. This condition is generally confounded with caries.

2d. Absence of vascularity. I have never been able, even with the assistance of a powerful lens, to detect a single blood-vessel traversing one of the opaque yellow spots. It is always impossible to cause the issue of minute drops of blood visible even through a lens, by compressing the neighbouring tissue, so as to force back the blood in the vessels towards the infiltrated portion. This absence of vascularity is one of the most important facts to recollect, for it will serve to explain several capital phenomena, hitherto passed over in the history of the tubercular disease of the bones.

3d. We have seen, that in the first period of the disease, the texture of the bone was not changed in an appreciable manner; such is not the case in the puriform infiltration. The tissue of the bone is in this case modified in a remarkable manner; it has undergone a hypertrophy which may be called interstitial, for there is no increase in the volume of the bone. The lamina composing the spongy structure are alone hypertrophied, and the cells of which they are the boundaries, become contracted and almost entirely obliterated. The tissue thus modified, resembles closely the compact tissue in its physical qualities, especially in its density. This hardening, like ivory, (*eburnation*,) of the cellular structure, has been noted in several observations by *M. Nichet*, and I confess it was not without some surprise, that, after having read these observations, I saw the following, among his

conclusions, in the second part of his memoir: "At other times, but more rarely, the tubercular matter is found spread in the small cells of the spongy tissue, *which has undergone no other change than a diminution of consistence.*"

Boyer had also noticed this hardening of the bony tissue, but was unable to account for it. He says, in treating of the pathological anatomy of white swellings: "It is deserving of remark, that there are sometimes found in the midst of this distention portions of bone which have acquired the colour and hardness of ivory." (*Traité des Maladies Chir.* vol iv. p. 499.)

These hardened portions were nothing else than fragments which had been affected with infiltration before being separated from the rest of the bone.

It is seen that I differ entirely from *M. Nichet*; nevertheless, I am the more decided upon this point, because having made my observations while *interne* at the Hôpital des Enfants Malades, in 1834, and having at that time arrived at an entirely different conclusion from that published by *M. Nichet*, in 1835, I have neglected none of the numerous opportunities presented to me, since this publication, to verify the side on which truth belongs, and I can affirm that I have not met with a single fact that does not sustain the proposition I have advanced. It sometimes happens, it is true, that in examining the bones of the foot or hand in cases of white-swellings of the ankle or wrist, some of these bones are found infiltrated with tubercular matter, and, at the same time, extremely friable. Upon directing a stream of water into the cells of the spongy tissues composing them, after a slight maceration, in order to dislodge the infiltrated tubercular matter, we find these bones of an extremely delicate texture. The partitions forming these tissues may be compared to the minute filaments composing the reticular tissues observed in the middle of the diaphyses of the bones of some large animals, as the ox, the horse, &c. Externally an exceedingly delicate layer alone remains, forming a shell of great brittleness, the weight of the bone not being a quarter of what it should be in the normal state; in a word, the bony structure seems to have become thinned, at the same time that it is filled with tubercular matter. But does this contradict what I have advanced respecting the condensation and interstitial hypertrophy of the bony tissue in cases of tubercular

infiltration? I think not. The identity of alteration is merely apparent in this case; in the first instance, the infiltration forms the essential character of the disease; in the second, it is only a casual occurrence. In fact, a close examination will show us that the other bones of the tarsus or carpus, although without tubercular alteration, present the same rarefaction of tissues; it is therefore very probable that this rarefaction exists before the infiltration. If we now recollect that when a bone of spongy structure is deprived of its periosteum, of its cartilages, in a word, of its protecting envelope, while the cells of this tissue freely opened, are bathed in purulent matter, this matter is observed to infiltrate itself by a sort of capillary attraction into the meshes of that tissue; it will be granted, I think, that the same is the case with the tubercular infiltration under consideration, while this infiltration is the more easily accomplished as the spongy tissues, more rarefied, present larger pores.

But to return to the tubercular infiltration properly so called; what are the phenomena that are occasioned by it? Permit me to say here, by anticipation, that *the necessary consequence of every tubercular infiltration into a bone is a necrosis of the infiltrated tissue*; this proposition is based upon the following observations: 1st. When a bone is affected with a puriform tubercular infiltration, the infiltrated portion already presents, although it is not yet separated from the rest of the bone, all the characters of a true sequestrum. No vessel can be perceived in it; not a single indication of the continuance of vitality.—2d. These infiltrated portions are often found surrounded by a circle of elimination. 3d. It is very common to meet with portions of bone completely necrosed, true sequestra, at the same time that, in other portions of the same bone, an infiltration of tubercular matter is seen. 4th. If we examine the structure of these sequestra, we perceive that they do not represent exactly the texture of the bone from which they have been detached, and that the modification they manifest is exactly the same as that I have spoken of when there is as yet merely the simple tubercular infiltration, that is to say, an interstitial hypertrophy. We may therefore conclude, that before being struck with death, the necrosed tissue has been affected with this infiltration.

To deduce rigorously from these data the general proposition

I have above announced, it must be admitted that the *tubercular infiltration always ends in a purulent infiltration*; and I do not think that any person will refuse to admit this fact, especially, when the analogous termination of the tubercular infiltration of the lung is considered.

Is this necrosis the consequence of an inflammation of the bony tissues, as *Delpéch* considered it? The analysis of the phenomena preceeding it, would not warrant us in such a conclusion; for the infiltrated portion, at first slightly vascular, gradually loses its vascularity, the bony structure becomes more dense and the vessels disappear. This mortification of the bony tissue might, perhaps with more justness, be compared to that physiological phenomenon under whose influence the fall of the antlers of the stag occurs each year. For it is known, that by the mere development of the base of each horn, the vessels entering into the antlers are at first compressed and then obliterated, so that all circulation in the bony tissues being arrested, the death and fall of the antlers is the consequence.

When a portion of the bone is thus struck with death, the separation takes place regularly, as in every other necrosis, presenting a series of phenomena, upon which I do not think it necessary to dwell; the disease consists then in the existence of a sequestrum contained in a cavity lined by the membrane of sequestration. This sequestrum, an actual foreign body, lodged in the midst of living tissues, may be the origin of all the symptoms attributed to necrosis, such as abscesses, fistulæ, copious suppurations, &c. &c.

At other times, although there is evident mortification of the bone, the separation is long delayed; 1st, because the cause of the necrosis, in this case, might almost be named chronic; 2d, the infiltration continuing to extend to the neighbouring parts, the limits between the healthy and diseased portions, are, as it were, changed each day, so that the circle of elimination cannot form itself.

To this circumstance is joined a phenomenon, which, although secondary, is nevertheless worthy of fixing our attention; I refer to the destruction of the infiltrated portion by an actual wearing away (*usure*.)

In fact, if the separation of the necrosed portion is delayed, the

sequestrum remains intimately united to the extremity of the bone to which it belongs, and follows that bone in all its movements. If then, as quite often happens, two sequestra are thus placed in contact, by the destruction of the parts that separated them, a rubbing and reciprocal wearing away of the contiguous parts is the consequence. This view is confirmed by the form given to the parts subjected to this friction, and by the presence of a considerable quantity of bony particles, like sand, mingled with the tubercular matter contained in the cyst surrounding the fragments.

To complete the history of this form of tubercular disease, I will add, that it may be followed by the formation of the tubercular cysts described when speaking of the first form of this disease: still, as the infiltration is commonly diffused, and as it often attacks a considerable extent of bone, it is more rare to find cysts well defined and so well organised as in the first variety. A consecutive and accidental caries may also develop itself, not indeed in the tissue primitively infiltrated, but in the bony structure around this spot.

But it must be recollected that this caries, far from being a necessary consequence of the suppuration of the tubercle, is merely an accidental, and even rare occurrence; it is a mistake, therefore, always to connect together these two diseases, which have but very distinct analogies with each other.

The following table in which I have brought together the principal traits of each of these two forms of tubercular disease in their order of succession, will serve as a summary, of what has been previously said, and place in bold relief the differences between them.

ENCYSTED TUBERCLES.

- 1st. Semi-transparent gray granulations.
- 2d. Crude, opaque, encysted tubercle.
- 3d. Bony excavation, loss of substance in that tissue.
- 4th. Evacuation of the tubercular cavity.
- 6th. Hypertrophy of the cyst, obliteration of the cavity, recovery.

In this table I have represented only the most simple march of the disease, and the termination towards which it appears natu-

rally to tend. But it has already been seen, and will be still more evident in the second part of this work, how local and accidental circumstances may interfere with this favourable result.

TUBERCULAR INFILTRATION.

- 1st. Semi-transparent gray infiltration.
- 2d. Interstitial hypertrophy of the bony tissue.
- 3d. Puriform infiltration.
- 4th. Necrosis of the infiltrated portion.
- 5th. Sequestration. Foreign body.

It may cause a little surprise to find in the preceding table the interstitial hypertrophy of the bony tissue placed between the semi-transparent gray infiltration, and the puriform; my intention is by to indicate that I consider the hypertrophy as an intermediate phenomenon between these two states, a phenomenon which manifests itself during the passage from the first to the second degree; for we have seen that this hypertrophy does not exist during the first period, while it cannot be admitted to take place during the second, when the bony tissue is deprived of its elements of nutrition and of life.

From what has been said, it is clear that the first variety of the tubercular disease could not be confounded with any other affection of the bony tissues; that it has its peculiar march and physiognomy, and affords but very distant analogies with the other organic lesions of this tissue. As to the second variety, it is not at all astonishing that it has been so long, and is still daily, confounded with caries; a mistake arising from the want of positive precision as to the anatomical character of caries, and from the fact that under this name very different pathological conditions are described. Besides, it must be allowed, that a portion of cellular tissue infiltrated with softened tubercular matter has, indeed, some resemblance in aspect to a carious portion; but it will always be easy to recognise the puriform tubercular infiltration by the interstitial hypertrophy, by the augmentation of solidity, and by the absence of vascularity; whilst in caries, properly so called, there is a rarefaction, a softening, and an increased vascularity of the bony tissue. Consequently, they are distinguished by organic conditions, not only differing from, but directly opposed to, each

other. Caries always proceeds from the circumference to the centre of the bone; the tubercular disease, from the centre to the circumference. Nothing would be more easy than to accumulate points of distinction between these two diseases; but I think enough has been said to avoid confounding them.

It is much more easy to understand its being mistaken for a simple necrosis; but, in a given case, the nature of the organic lesion will be easily determined, by recollecting that simple necrosis does not cause any modification of the intimate structure of the dead tissue, whilst the tubercular infiltration causes beforehand an interstitial hypertrophy.

There is still another pathological condition of the bones with which tubercular infiltration is confounded; I refer to the supuration of that tissue, a disease described under the name of inflammation of the medullary membrane of the bones; the interstitial hypertrophy will suffice here, also, to prevent the mistake.

SEAT OF THE TUBERCULAR DISEASE.

Although I have not treated separately of the seat of the two varieties of this disease, it will be easy to recognise, from the data we have passed in review, what is common to both, and what is peculiar to one or the other. All parts of the bony system are not equally liable to its attack; it may indeed be said, in a general manner, that it develops itself almost always in the spongy tissue of the bones. But we must remark here, that the spongy tissue of the bones, in an adult, presents itself under two different conditions, which may be designated by the names of *adipose* cellular tissue, and of *vascular, bloody*, or simply *red* cellular tissue. The first variety constitutes the extremities of the long bones and the short bones of the limbs. All the bones of the trunk are formed of the second; to ascertain this difference, it is only necessary to compare the spongy tissue of one of the condyles of the femur, with that of the body of a vertebra in the adult. In the first, the meshes are filled with a yellow, adipose matter; while the cells of the body of the vertebræ are composed of an extremely vascular red substance, presenting scarcely any trace of fatty matter; now, it is in this

second variety of the cellular tissue of the bones, that the tubercular productions are almost exclusively developed. In children, as this difference in the tissues does not exist, and as the bones of the limbs as well as those of the trunk are all formed of this red cellular tissue, the tubercular disease attacks indifferently the bones of the limbs and of the trunk; in the adult, on the contrary, it is met with only in the bones of the trunk. This law admits of but very few exceptions; these too could perhaps be explained by the fact of a tardy transformation of the red cellular tissue into the adipose. It is in the very centre of the bony tissue rather than at its surface that this disease originates; a fact more easily ascertained in the case of encysted tubercles than in that of tubercular infiltration, which being ordinarily diffused, speedily reaches the surface of the bone. In the long bones, the extremities are the most usual seat of tubercles; and, it has appeared to me, that they are more frequently developed in the epiphysis, than in the contiguous and enlarged extremity of the diaphysis. Still, I have met with some cases, rare it is true, of encysted tubercles lodged in the compact tissue of the diaphysis; but I could not affirm that the accidental production was not developed in the medullary tissue, and that the destruction of the compact tissue was not consecutive. In the long bones, one extremity is generally attacked in preference to the other; thus in the femur, it is the inferior extremity; the contrary is the case with the tibia; in the humerus and the bones of the fore-arm, the cubital extremity is most generally affected.

This organic lesion has been observed in almost every bone of the skeleton; the following classification will indicate the order of frequency in each of them:

- 1st. *Vertebræ*;
- 2d. *Tibia, femur, humerus, (in children);*
- 3d. *Phalanges, metatarsal metacarpal bones;*
- 4th. *Sternum and ribs, iliac bones;*
- 5th. *Petrous portion of the temporal bone;*
- 6th. *Short bones of the tarsus and of the carpus.*

The bones not mentioned in this table should be classed with those with which they have the greatest analogy of form and structure.

ETIOLOGY. I shall not dwell long upon the etiology of the

tubercular disease, for I could only repeat here, what is every where said upon the causes of tubercles in general; I shall content myself with remarking that it is chiefly during infancy that this alteration manifests itself. I have met with it several times in children of two or three years; it begins to be less frequent towards the age of fourteen or fifteen, although it is still quite often observed at that age, and even at that of nearly thirty. The oldest person in whom I have seen it was fifty-five years old.

I regret my inability to support the propositions in the two preceding articles, by a statistical table; but it will be easily understood, that such statistics could not be made without an accurate knowledge of the disease, and without a certain method of distinguishing it from the organic lesions ordinarily confounded with it.

Application of the preceding views.—I have hitherto avoided making any application of the data acquired, in order not to distract attention from the general history of the evolution of tubercular matter in the bones: we will now proceed to make that application. I would premise, that my intention is not to give a complete history of the diseases I am about passing in review,—I propose only to show how many still obscure or badly explained points of their history find a satisfactory interpretation in the facts I have just pointed out; having thus more precise ideas of the degree and of the cause of the severity they may present, we shall be conducted by that very circumstance, to a more rational treatment.

I shall examine successively the tubercles, 1st, in the vertebral column, (*mal vertebral de Pott*;) 2d. in the epiphyses of the long bones, where they constitute a variety of white-swelling; 3d, in the phalanges, the bones of the metacarpus, and of the metatarsus; 4th. in the petrous portion of the temporal bone.

The vertebral column may be the seat of encysted tubercles, or of tubercular infiltration; the latter is the more common of the two forms. The tubercles may develop themselves in the body of the vertebra, or in its apophyses. What follows applies more especially to the tubercular disease of the body of the bone, which is unquestionably the most common form, and which alone causes that deformity of the spine known by the name of gibbosity.

A. When an ENCYSTED TUBERCLE develops itself in the body of one or more vertebræ, it hollows out a cavity, and occasions in the bone a more or less considerable loss of substance ; this last becoming daily more enfeebled, as the tubercular cavity increases in size, a moment arrives when the body of the vertebra, reduced to a bony shell, is no longer able to sustain the weight of the parts above it, and is suddenly crushed ; some of the columns or partitions which supported the parietes, although preserving their normal structure and solidity, are broken and the opposite sides of the cavity are brought, if not into immediate contact, at any rate into greater proximity. The part of the vertebral column above the tubercular excavation, becomes inclined to an angle with that below, and gibbosity is then almost instantaneously produced ; many examples of these gibbosities thus suddenly occurring, are found recorded. The parietes being thus brought nearer, the tubercular matter is in part expelled ; the cyst becomes hypertrophied, fills up the cavity that might still remain, and undergoes the fibrous transformation ; the bony portions of the processes become consolidated, are united together in their new position, and the cure is complete. When we are enabled, several months or years after the formation of these gibbosities, to examine the vertebræ, we find upon the body of the vertebræ irregular, angular solutions of continuity, in which it is impossible not to recognise an ancient and consolidated fracture.

This is the most simple manner in which gibbosities are formed, but not, as I think, the most common ; it is more usual to see the parietes of the cavity yield to the pressure above them without being fractured ; the gibbosity in this case may not be so suddenly formed in, although it follows in a short period of time.

The destruction of the bony tissue, instead of stopping here, may, on the contrary, continue to advance, either forming new cavities, which soon open into the primitive cavity, or form the daily enlargement of the latter by the process of absorption which has been mainly instrumental in its developement. The destruction of the tissue is then sometimes very extensive ; the bodies of several vertebræ may disappear entirely, without leaving a single separate fragment, a single remnant, so to speak, of the destroyed vertebra. I have seen in a child the entire destruction of the four last cervical and first dorsal vertebræ ; the cervical

portion of the spine was bent so as to form a right angle with the dorsal ; the body of the third vertebra of the neck rested by its anterior face upon the superior surface of the body of the second dorsal vertebra. I have several times met with this disposition which is easily explained when we consider that the posterior part of the two vertebræ being kept at their proper distances by the processes, the superior vertebra must move through a quarter of a circle turning upon a fictitious axis which would pass through its two holes (by which the nerves, blood-vessels, &c. pass out.) In consequence of this movement, its anterior face turns directly downwards, while its inferior face looks backwards ; besides, the anterior vertebral ligament which was connected with the destroyed vertebræ is carried, in consequence of its connection with the superior vertebra into the interval between the two bodies of the vertebræ, where it serves as a fibro-cartilage, being doubled on itself. *M. Nichet* has presented in his case x. a remarkable example of this destruction ; the bodies of eight dorsal vertebræ have entirely disappeared ; the second and eleventh dorsal vertebræ, which form the upper and lower limits of the destruction, are united by a thick, fibrous membrane, which does not project at all in front. Remarking upon this case, *M. Nichet* proposes the following question : — “ But in what way has the organic lesion acted to cause the disappearance of so vast an extent of the vertebral column ? ” An analysis of the answer of *M. Nichet*, will serve, I think, to render more precise our ideas upon this point. *M. Nichet* thus expresses himself : “ In general, this destruction may occur in several ways : 1st, when the tubercle attacks the body of a vertebra, it forms there cavities so large, and reduces it to such delicate walls that it becomes incapable of supporting the parts above ; the bone is suddenly crushed and the curvature of the spine is abruptly produced : 2d, the tubercles situated in front of the body of one or more vertebræ cause their destruction from before backwards : 3d, when a tubercle developed in a cartilage, has caused its destruction, the two vertebræ it had separated wear each other away by friction ; then are the cartilages and vertebræ above and below, constantly brought nearer by the increasing curvature of the column, are reacted upon in a similar manner. It is probably, by this last process, that the vertebræ in the subject

of the preceding observation have disappeared ; the sudden crushing would have left bony sequestra, of which not the slightest trace has been found." (p. 26.)

All authors, since the time of Galen, who have spoken of vertebral tubercles, have emulated each other, as it were, in repeating that tubercles situated in front of the vertebræ wear them away from before backwards, without enabling us to attach any sense to what they understand by this species of destruction. Sometimes a depression is met with in part of the body of the vertebræ, at a point corresponding with a tubercular deposition ; but this loss of substance is no more a wearing away than is the depression corresponding to the passage of an artery over a bone. In the passage marked 3d, *M. Nichet* explains himself more fully ; he supposes that a tubercle, developed at first in a cartilage, has caused its destruction, and that the two vertebræ which were separated by this cartilage, being once placed in contact, wear each other away by friction. Let us see, however, in the first place upon what this opinion, that the tubercle is first developed in the cartilage and not in the bony tissue, is founded. If we find a tubercular deposition in the *remains of the cartilage after the destruction of the ninth and tenth dorsal vertebræ*, is not the same also met with in the very body of the twelve dorsal vertebræ ? Besides, in order to prove that the tubercle developed in the inter-vertebral cartilages commenced there, and is not the result of the extension of the disease from the neighbouring bony tissue, it should be enveloped on all sides by the sound cartilage. But the author does not explain himself upon this point ; I find then already, in the very case reported by *M. Nichet*, two reasons if not for rejecting his opinion, at any rate for considering it as deficient in satisfactory proof. (I shall have occasion again to refer to the primitive developement of the tubercular disease in the cartilages, and I hope to be able to demonstrate that it is of extremely rare occurrence, although the contrary opinion is still advanced.)

"The two vertebræ," he says, "wear each other away by friction ; the cartilages and vertebræ above and below are acted upon in a similar manner. It is probable, that by this last process, the vertebræ in the subject of the preceding observation, have disappeared." What are the proofs ? "The sudden crush-

ing of the vertebræ would have left bony sequestra of which not the slightest trace has been found." Thus upon the single circumstance that no bony sequestra are met with, *M. Nichet* rejects the hypothesis of a sudden crushing, and considers himself immediately authorized to admit a mechanical wearing away; but he was not compelled to allow a sudden crushing; a gradual yielding without fracture may easily be supposed; and even admitting a fracture, there is no evidence that the fragments should necessarily become necrosed; for, as *M. Nichet* has very well shown, the tissue bordering upon the tubercular excavations has not undergone any alteration; it remains in a perfectly normal condition: (we know, besides, that the sequestra found in tubercular cavities are caused by a peculiar alteration of the bony tissue and not by fractures as *M. Nichet* supposes.)

Let us now see what are the facts that militate against the supposition of mechanical wearing away: I will not speak of the disinclination to admit the possibility of such a destruction of living tissues, the seat of active circulation, without, in most cases, the manifestation of any reaction capable of limiting this work of destruction; still, it must be allowed, that this occurrence would be an exception to the common law which governs pathological phenomena; but if we admit a purely mechanical phenomena, we must accept it with all its consequences. Now it is impossible that vertebræ should wear themselves away, by reciprocal friction, without causing fragments, or bony remains; but observation teaches us that in the present case, this bony dust, the mark of destruction in consequence of friction, is never met with. In the example cited by *M. Nichet*, eight bodies of vertebræ had disappeared, and there was only found, after so vast a destruction, a spoonful of *soft butter-like* tubercular matter, without the slightest particle of bone. If the absorption of liquids, or of matter capable of softening or passing to the liquid state, is daily observed, I do not think any one would be inclined to admit, for a single instant, that an inorganic dust, an actual foreign body, could be taken up by absorption. I do not think it necessary to sustain this fact by additional proof.

But let us return to the question proposed by *M. Nichet*. How has the organic lesion occasioned the destruction of the tissues? I do not think that it is necessary to introduce a new

cause to explain the facts. This destruction appears to me to be in every respect analogous to that observed in the centre of the body of each vertebra, that is to say, an absorption of tissue. The extent of the tissues destroyed is the only difference. A cavity is formed in a vertebra, extends in every direction, destroys the fibro-cartilages, which separate the vertebræ, invades and successively destroys these vertebræ. The tubercular matter is in part evacuated, in part re-absorbed; the opposite extremities of the cavity approach each other, and the space is thus filled up. It is easily conceived then how the gibbosity, after having appeared more or less rapidly, may daily increase in consequence of the progressive destruction, and it must be recollected that the parietes of the cavity could not be brought together without the angular curvature of the spinal column.

In some cases bony bridges are seen extending from one vertebra to another, representing as it were bony splints destined to sustain the vertebral column, enfeebled, as it is, by this loss of substance. These preserve the natural erectness of the vertebral column; while, at the same time, they prevent the approximation of the parietes of the cavity, thus impeding the process of filling up. Far from considering these bony bridges as favourable circumstances in the disease, I do not hesitate to consider them an obstacle to the ordinary mechanism of spontaneous cure; hence it should be laid down as a principle, that all attempts to obviate the production of the gibbosity should be considered as irrational. The efforts of the physician should aim, not to oppose the gibbosity, but to suspend the secretion of tubercular matter, the source of all the accidents. It is worthy of remark, that the *anterior* vertebral ligament often becomes ossified and forms these additional bony columns, while it is extremely rare, if indeed it ever occurs, that the *posterior* ligament is thus affected, a most fortunate circumstance, and one tending to diminish the frequency of compression of the spinal marrow.

B. The vertebral column is often the seat of a TUBERCULAR INFILTRATION, ordinarily presenting itself in a diffused form; it is rare to find but one or two bodies of vertebræ affected; most generally several, five or six, for example, are observed entirely deprived of periosteum, and separated from the anterior vertebral ligament by a puriform tubercular collection; the bone, thus denu-

ded, is of a grayish yellow colour, and appears saturated with pus; it has still its natural form, and presents, but very rarely, small bony vegetations, on its surface; it is considerably harder than the healthy vertebræ. (Superficial caries of authors.)

Analyzing the phenomena of this form of the tubercular disease of the vertebræ, as we have done those of the preceding, we would ask, in the first place, how is the gibbosity in the form under consideration produced? Two causes concur here: 1st, the destruction of the inter-vertebral fibro-cartilages: 2d, the wearing away (*usure*) of the bodies of the vertebræ.

Destruction of the inter-vertebral fibro-cartilages. In this variety we often observe an entire destruction of one or more inter-vertebral disks, with scarcely a few remains still adherent to the two bony surfaces that gave them insertion. The diseased region of the spine then strongly resembles portions of the vertebral column of which the disks have been almost entirely destroyed by a prolonged maceration, while the bones have preserved their natural form and aspect. This has given origin to the remark that the disease often commences in the inter-vertebral cartilage; but this arises from a false application of a true principle, and one daily made use of in the study of pathological anatomy. In fact, it is evident that if the inquiry related to two organs formed of the same tissue, and placed in the same conditions, the conclusion that the most altered of the two had been the first affected, would be perfectly justifiable. But in the present case the organs are formed of two different tissues; in one it is the bony, in the other the fibrous tissue; the conclusion then is no longer legitimate. This error has been the more easily accredited, as authors were preoccupied with the idea that the diseased vertebra ought to be softened; but, as in this case, they found them hard and solid, they did not hesitate to conclude that the vertebræ were scarcely affected at their surface, while the cartilages, entirely destroyed, appeared to them the primitive seat of the vertebral disease. Passing by reasonings based upon facts imperfectly observed, let us see what observation teaches us respecting this matter: 1st, It is very common to find a gelatinous infiltration of tubercular matter in the body of a vertebra without any alteration of the fibro-cartilages: 2d, The puriform infiltration, on the contrary, when it has

reached the surface of union of the cartilage, is always accompanied with an alteration of these cartilages; I have never seen this lesion except under these circumstances: 3d, This destruction of the cartilage has always the same limits as the infiltrated spot upon the surface of the bony tissue: thus, for example, if the body of a vertebra is infiltrated only on one of its lateral halves, only that half of the inter-vertebral cartilage, corresponding to the lesion in the bone, will be destroyed: 4th, If the body of one vertebra only presents this infiltration, the destruction does not extend the whole thickness of the fibrous disk, it is confined to that part which was in contact with the infiltrated bone. There is, therefore, an exact correspondence between the puriform infiltration of the bony tissue and the destruction of the fibro-cartilages. Now, as the puriform infiltration is always consecutive to the semi-transparent infiltration, we have a right to conclude that the alteration of the cartilage is equally consecutive to that infiltration, and consequently consecutive to the alteration of the bone. There are, it is true, in the observations of *M. Nichet*, some facts that appear to militate against this conclusion; thus, for example, in the first observation, in which he says that the cartilage which united the two vertebræ had entirely disappeared, the surfaces left denuded by the destroyed cartilage, are represented as entirely unaffected. It is here a question of words, and it is probable that these surfaces considered natural because they were smooth, regular, and of a natural hardness, would have presented to me some of the characteristics of a veritable infiltration. The observation, No. IV. is the only one in which a tubercle appears to have been developed in a fibro-cartilage, as a complication of a tubercular infiltration. As regards myself, never having observed a single similar case, although my opportunities for examination have been abundant, I think, that this single fact recorded in the work of *M. Nichet* should be regarded as an exception to the law.

The ideas derived from anatomy, respecting the vital conditions of the fibro-cartilages explain very clearly the series of phenomena observed. Nearly all the vessels that penetrate the fibro-cartilages, reach their two surfaces after having traversed the bony structures of the vertebræ. What then occurs when one of these fibro-cartilages is situated between the bodies of two vertebræ affected with puriform infiltration? All vascu-

larity being destroyed in the tissue of the bone next to the cartilage, all the vascular communications of this cartilage are dis-severed or at least modified in a marked degree. The fibro-cartilage, deprived of the elements of circulation and nutrition, dies, and from that moment subjected to chemical laws, it is destroyed by a mechanism similar to that occasioned by maceration. Surgeons and anatomists are well aware of the odour of maceration presented by the pus which issues from these pretended caries of the vertebræ. How often have we heard *M. Dupuytren* call attention to this point of observation to which he attached great importance !

2d. *Wearing away (usure) of the vertebræ.* — As soon as one or more cartilages are destroyed, the vertebral column is seen to bend forward, though as yet there is no gibbosity, properly so called. The bodies of the vertebræ, not yet changed in form, come in contact by their corresponding faces, and we then observe a veritable wearing away, the consequence of friction. As the posterior parts of the bodies of the vertebræ are fixed by the articular processes, and as the weight of the viscera tends to bend forward the spinal column, the anterior part of each body is the part which suffers most from the friction and wearing ; each portion of the cylinder is thus observed to take the shape of a wedge, the base being turned backwards, and the summit forwards. The gibbosity then becomes evident, but takes place in a gradual and progressive manner. I admit, as may be seen, in the case of tubercular infiltration, this mechanical wearing away, which I rejected in the former case ; but it must be remarked, that here the circumstances are entirely different ; I admit the wearing away of the necrosed bones, but not of the living bony tissue ; I am, moreover, authorized to admit it, by the wedge form constantly taken by the body of the vertebra undergoing this change, and by the presence of a bony dust, constantly found in the cavity, or in the purulent sanies that flows from it.

To this cause of destruction another is soon added ; the separation of the necrosed fragments, sometimes of the whole body of a vertebra. These sequestra fall into the cavity, where they remain free, and keep up by their presence a copious suppuration. Sometimes, both varieties of this disease are met with in the same spinal column, so that there is, so to speak, a fusion of the characteristics peculiar to each of them.

From the preceding data, we may conclude that the two varieties of the tubercular disease of the vertebræ differ in a marked manner from each other, in respect to their essential characteristics, and in respect to their severity. The first alone seems to me susceptible of cure; the second is always incurable, because it generally attacks a greater extent of the vertebral column, and, especially, on account of the sequestra, veritable foreign bodies, which keep up a deep and inexhaustible suppuration. It will now be seen at once, how we explain that opinion, which at first appeared a true surgical paradox, namely: that the profound caries is alone susceptible of cure, while superficial caries is ordinarily incurable. The first announces itself by a gibbosity, which appears sometimes suddenly, but always very rapidly; the second by a deformity that manifests itself only after some time, and in an insensible manner. Thus, all other things being equal, the sudden appearance of a gibbosity, in a case of vertebral disease, should be considered rather a fortunate than an unfavourable circumstance; for it is, in our estimation, the indication of the existence of the first form of this affection, which alone, as we have said, is susceptible of cure.

Tubercles in the articular extremities of the long bones.—The tubercular disease seated in the spongy extremities of the long bones, and consequently in the vicinity of the articulations, gives rise to various pathological phenomena, generally comprehended under the denomination of white-swelling. These phenomena should be separately studied in each of the two varieties of the tubercular disease of the bones. I will not here speak of the secondary symptoms of these white-swellings, such as pain, engorgement of the tissues surrounding the articulation, tubercular abscesses, and the fistula succeeding them; they would belong to a complete history of the tubercular white-swelling; I shall dwell solely upon two points, which may be considered as characterizing these two varieties.

When an encysted tubercle is developed in the extremity of a long bone, it is at first enclosed in the middle of the spongy tissue of the bone, at a small distance from the articular cavity; it increases in all directions, and gradually approaches, on the one side, the articular cavity, and on the other, the periphery of the bone situated outside of the articulation. If in the progress of

developement, it reaches more quickly the surface outside of the articulation, it empties itself into the neighbouring cellular tissue ; an abscess forms there, grows and opens, and is followed by a fistula ; the tubercular cyst becomes hypertrophied, the cavity in the bone is filled up, and a spontaneous cure is common in this case. But if, on the contrary, the tubercle first reaches the articulation, either because it has commenced at but a little distance from it, or because the new bony layers, accumulating where the bone is covered by its periosteum, cause the constant retrogradation, so to speak, of the periphery of the bone, the diarthrodial cartilage is perforated, the tubercular matter is effused into the articulation, and suddenly occasions an intense arthritis, which is accompanied with the most serious local and general symptoms, and may be followed by an almost certain disorganization of all parts of the articulation. I have seen several examples of this unfortunate termination. A child, of twelve years of age, presented several of the characteristics which are generally regarded as peculiar to the lymphatic constitution, but in other respects enjoyed good health ; he experienced, at distant intervals, a sensation of transient fatigue in the knee-joint ; yet he could walk, run, and in a word, execute all the movements, however extended or rapid, without pain, and without the slightest inconvenience. Suddenly, a violent pain was felt in the left knee ; it increased the next day, and on the day following ; the articulation swelled and became red ; an abscess formed in the vicinity, burst, and discharged outwardly a purulent liquid containing some tubercular flocculi. The suppuration continued, and gradually exhausted the patient, until death was the consequence.

On examination after death, I found the articulation filled with pus, and a circular perforation about four lines in diameter, between the two condyles of the femur, and corresponding to a globular cavity, lined by a very vascular membrane, half a line in thickness, which was easily recognised as the envelope of a tubercle of the bone. Around this perforation, the diarthrodial cartilage was not much changed ; it had only lost its natural brilliancy ; the synovial membrane presented a dull, rough surface, covered, in some parts, by a layer of albuminous matter. The sub-serous capillary vessels, extremely distinct, formed a

violet-red net-work, easily perceptible through the serous membrane. A case similar to this has been collected at the Hôpital des Enfants Malades by *M. Ruz*, and published. I had occasion to examine another case of tubercular perforation of the diarthrodial cartilage in a child, that died of pneumonia, a sequela of rubeola, two months after the invasion of the articular symptoms, which had been mistaken, on account of the suddenness of their appearance, for a rheumatism. In a little child that remained in the *Salle Sainte Marthe* at the Hôtel Dieu, during nearly a year, a coxo-femoral arthritis commenced suddenly by an extremely violent pain in the right hip; several abscesses formed there, and gave discharge at first to a dirty serous fluid, holding in suspension tubercular flocculi; the general and local symptoms gradually ceased, the suppuration stopped, and the cure was complete. Is it not presumable that in this case the disease of the hip had originated from a tubercle, of which the cyst had opened into the articulation, and the cavity finally been filled up?

A tubercular infiltration may be developed in the epiphysis of a long bone, without invading that portion of it which forms the articular surface. The infiltrated part is necrosed, elimination takes place, and the extraction of the sequestrum causes a complete cure. But such is not the case when the infiltration extends to the surface of the bone covered by cartilage. In fact, this cartilage soon disappears, the mechanism of its destruction being, without doubt, analogous to that observed in the case of inter-vertebral cartilages. Such at least seems the most probable opinion, if we consider the identity of the principal pathological circumstances. But it is worthy of remark, that the destruction of this cartilage is not always followed, as in the preceding case, by a purulent effusion into the articular cavity; it is, on the contrary, quite common to see this cavity obliterated before the complete destruction of the cartilage which covers the infiltrated portion of the bone: the difference may arise from the fact, that in the first case, the disease of the bone is ordinarily confined to a very small portion, and that the encysted tubercle destroys the cartilage without altering the part surrounding the perforation, and without exciting an inflammatory reaction in the neighbouring tissues: whilst the infiltration, generally diffuse,

and extending over a large surface, determines in the serous cavity an inflammation that results in the obliteration of the cavity. After the destruction of the cartilage, the infiltrated portion is necrosed, and separates : and it is then that we find those hard, white, ivory-like portions of bone, contained in the articular cavity. We now easily perceive how this fact, noticed by *Boyer*, and considered by him so strange, receives a rigorous explanation. These sequestra, enclosed in the articular cavity, keep up a suppuration, which may be prolonged for several years, and occasion marasmus and death. The most rational treatment in such cases, is evidently to extract the sequestra, the resection of the diseased extremities of the bone being already, so to speak, made spontaneously ; but it must be confessed that it is rare that the diagnosis can be so clearly established as to decide us to act under such circumstances. Our efforts, therefore, should tend to put an end to this uncertainty, and then only shall we be able to glory in having cured a disease, of which the danger is ordinarily averted only at the expense of mutilation.

In children, the form of the bony extremities suffering under this infiltration, is soon modified in a remarkable manner, occasioned by an arrested developement of the infiltrated portion. Thus, if we suppose one of the condyles of the femur to be the seat of infiltration, while the other is perfectly healthy, this last alone will continue to grow, and a deformity will soon be apparent in consequence of this unequal developement. This deformity of the femur will be soon followed by that of the tibia, one of the condyles of which will be extraordinarily developed, and will fill up the void which would otherwise be formed in the articulation.

From this short sketch of the two varieties of the tubercular disease of the articulations, it may be seen that there is a striking analogy between them and the tubercular disease of the lungs in respect to perforations. Thus, the first variety corresponds to the cases in which only a small number of pulmonary tubercles exists, one of which opens into the pleura, and occasions a sudden and acute inflammation of that membrane ; whilst the tubercular infiltration, ordinarily diffuse, correspond to the cases in which, a great number of tubercles occupying the lungs, there are formed between the two lamina of the pleura, adhe-

sions which prevent the effusion of softened matter into its cavity.

Having then given the key to the application of these general data, I will confine myself to a few indications respecting tubercles in the other bones.

The phalanges of the fingers and of the toes, the bones of the metacarpus and metatarsus, often present the first variety of tubercular disease, constituting the spina-ventosa of children, a disease which has no analogy with the spina-ventosa of adults, adults, is almost always spontaneously cured, and never requires amputation.

Certain cases of chronic otitis, especially in phthisical patients, are often only the result of the suppuration of an encysted tubercle, which has opened into the cavity of the tympanum, or into the external auditory meatus. I have met with three cases in children; a fourth, found in an adult affected with phthisis, has been shown to the Anatomical Society by *M. Tonnellier*. The central necroses of the calcaneum are often, especially in children, merely the result of a tubercular infiltration, which has occasioned the death of the infiltrated portion. An examination of the sequestrum, which presents an augmentation of density, consequent upon interstitial hypertrophy, will convince us of this fact.

I think that enough has been said to lead to the conviction that the knowledge of the tubercular disease of the bones, throws new light upon the history of several of the diseases of this tissue; more ample details would belong to a complete description of these diseases.

BIBLIOGRAPHIC NOTICES.

The Elements of Materia Medica : comprehending the Natural History, Preparation, Properties, Composition, Effects and Uses of Medicines. Part I. Containing the General Action and Classification of Medicines, and the Mineral Materia Medica. By JONATHAN PEREIRA, F. R. S. and L. S. &c. London, 1839. 8vo. pp. 558.

THERE is perhaps no department of medical science, which has undergone such important changes and modifications in a comparatively recent period, as that of materia medica or pharmacology. It is true that every branch of medicine has received an astonishing impulse within the last quarter of a century. General anatomy, pathology, and medical jurisprudence, have been created ; physiology has assumed a practical and demonstrative character ; while chemistry and botany have shed a steady blaze of light, and opened up new avenues to scientific discovery. Zealous labourers have sprung up on every side ; and a generous emulation has brought forward a host of able competitors, ardent in the race, and panoplied for successful action. The age of mysticism, of blind credulity, and of visionary speculations, has gone by, and whatever is now advanced as important to the healing art, must be brought to the test of reason and of facts. Nature, with her ample stores, is spread before us ; life and organization, diseased action and structural changes, chemical laws, and botanical affinities, all claim the most profound and diligent investigation. Truly may the physician of the present age exclaim, "*ars longa, vita brevis!*"

The object of the author, as stated in his preface, is to supply the medical student with a class-book on materia medica, containing a faithful outline of this department of medicine ; embracing a concise account

of the most important modern discoveries in natural history, chemistry, physiology, and therapeutics, so far as they pertain to pharmacology. This, the author has accomplished, in a more able and satisfactory manner, than we have seen in any other work. The subjects are treated in the order of their natural historical relations, as being the most convenient, and the least objectionable mode of classifying the objects which come under notice. The same plan has been followed by Dr. Christison, in his invaluable work on poisons; but so far as we can learn, this is the first systematic work of the kind in the English language, on *materia medica*, in which this method has been followed.

Those who read the *London Medical Gazette*, will perceive that Mr. Pereira's book is made up chiefly of his lectures, delivered at the Aldersgate School of Medicine, in the years 1836—7—8. Some excrescences have been lopped off, and some deficiencies supplied; and many of the articles have been illustrated in a beautiful manner, by wood-cuts and steel engravings, so that on the whole, the value of the lectures, as originally published, has been much enhanced.

The incorporation of natural history, botany, chemistry, anatomy, and physiology, into works of this nature, has been objected to, as leading to unnecessary and tedious diffuseness, adding largely to their expense, and without affording any equivalent advantage. This objection would perhaps have weight, were the author to go into such minute detail as we find in the "*Elements*" of Prof. Thomson, which will be found noticed in the present No. of this *Journal*. In a *text-book* on *materia medica*, it is questionable whether diffuseness be not unnecessary, and rather calculated to discourage the medical student, than otherwise; still, we should think such a work very imperfect indeed, did it not contain such general considerations as are necessary for the perfect elucidation and thorough understanding of subsequent details. We believe it will be found that Mr. Pereira has hit the proper medium, neither enlarging too much, nor encroaching too far on the domain of other text-books; nor on the other hand, leaving any thing unexplained, which is essential to an understanding of what follows. As well might it be urged, that works on midwifery should contain no anatomy; those on toxicology, no physiology or pathology; and those on the practice of medicine, no therapeutics, as that works on *materia medica* should contain no chemistry, natural history, or physiology. The author has compressed within less than one hundred pages, what in Prof. Thomson's work, occupies more than twice the same space; and we venture to remark that he has left nothing unsaid, which was essential to be known. In describing individual articles, however, there is a particularity and full-

ness, which we find in no other work. For example, his remarks on Iodine occupy fourteen pages, without including its compounds. Prof. Thomson's but five, including the compounds; and the former are systematically arranged under the following heads: general history; natural history; preparation; properties; characteristics; purity; physiological effects; *modus operandi*; uses; administration; antidotes. For lucid order and perspicuous arrangement, we have never seen a work of the kind, which will compare with Mr. Pereira's; and this is one of the important features, which commend it to the favourable notice, not only of students, but of physicians generally. But this, though a highly important feature, is, nevertheless, not its chief excellence. The author not only displays great learning and consummate talent, but throughout appears imbued with sound practical experience. Many works of this nature have not been written by practical men. Accordingly they are of little value as safe guides to practice. This will not apply to the work in question. We purpose to notice this publication more in detail, when the second part has been received, which will doubtless be in time for the next number of our Journal. In the meantime, we hope that some of our enterprising publishers will favour the profession in this country, with a re-publication of the work, at as early a period as possible.

C. A. L.

Flora Medica. A Statistical Account of all the more important Plants used in Medicine, in different Parts of the World. By JOHN LINDLEY, F. R. S. London, 1838, 8vo. pp. 656.

WE had purposed, under a notice of the above work, to consider somewhat in detail, the great advantages which the medical man may derive from an intimate acquaintance with the natural system of botany; but these remarks will be mostly deferred to a future number of the Journal.

The difficulties which many suppose must necessarily be encountered in the study of the natural system, are greatly exaggerated. Because the vegetable kingdom comprises a great number of families, it is inferred that the study of plants according to this method, cannot be advantageously prosecuted, without an acquaintance with a very large number of vegetable forms. But this is far from being the fact. Although there are at this time nearly three hundred natural orders of plants established, two-thirds of which have representatives in this country, yet the principal part of our vegetation is comprised within a very moderate number of families. It has been calculated, that thirteen-sixteenths of

all the flowering plants of North America, so far as at present determined, belong to thirty-five orders; and *nine* of these orders comprise about half of the whole number. An acquaintance, therefore, with a few important and well-known tribes, offers a key to the knowledge of nearly all our plants. And moreover, the careful and thorough study of even a single plant in the principal divisions of each order, leads directly and certainly to a general knowledge of the structure, habit, uses, and sensible properties of the whole.

A few examples will serve to show the great value of the natural system to the physician in investigating the properties of vegetables. The *Araliaceæ* yield a *bitter principle*, as *panax quinquefolium*; the *Umbelliferae* yield an *aromatic volatile oil*, as *carum*; *pimpinella*; *fœniculum*; *daucus*; *coriandrum*; *anethum*; also a *fœtid gum resin*, as *galbanum*; an *acid gum resin*; and lastly, a *narcotic principle*, as *conium*. The *Ranunculaceæ* yield a *narcotic principle*, as the *aconite*; a *purgative principle*, as the *hellebore*; and an *acid principle*, as the *ranunculus* and *delphinium*. The *Papaveraceæ* yield a *narcotic principle*, as the *papaver*. The *Cruciferae*, a *volatile and pungent principle*, as the *sinapis* and *cardamine*. The *Myristicæ*, an *aromatic volatile oil*, as the *nutmeg*. The *Malvaceæ* abound in *mucilage*, as the *malva*. The *Aristolochiæ*, a *stimulant, bitter principle*, as the *snakeroot*; while the *Rosaceæ* yield an *astringent principle*, &c. We might thus proceed throughout the natural families composing the classification of Jussieu, and show that, as a general rule, (the exceptions being few and unimportant, and often owing to the influence of culture,) plants belonging to each of these orders yield an analogous principle; but it is unnecessary. Our object is attained if we can induce physicians to examine the subject.

The vegetable materia medica of the United States, is as yet, almost a *terra incognita*. The Bartons, Bigelow, and Rafinesque, have, it is true, described a few of our medicinal plants, and given us beautiful plates of the same, but how meagre is their account of their medicinal virtues! how little is satisfactorily ascertained with respect to their peculiar properties, and the indications they are respectively calculated to fulfil! Of many of them a mere technical description is given; of others, it is said they have been employed by the Indians, and are therefore recommended to us, as worthy of further trial. Now, no country on the face of the globe, is richer in materia medica than our own; and certainly none inhabited by civilized people, has been less investigated and explored. A noble field thus lies before us to excite and reward exertion, and rich and abundant results await the labours of those who zealously enter upon it. Medical botany has received a new and mighty

impulse of late, by the application of analytical chemistry; by the aid of which, the peculiar proximate principles of vegetables are detected with the utmost precision and accuracy. If any one will take the pains to examine Thomson's *Organic Chemistry of Vegetables*, noticed in this No. of our *Journal*, he will see that here is actually a new science sprung into existence within a few years, promising the most astonishing results, and sufficient to employ the time and energies of the most laborious votaries of science. Among the almost numberless vegetable productions of this country, we believe it would be difficult to name more than half a dozen which have been properly analyzed; but had this department of the *materia medica* been prosecuted as it deserved, we should not only, at this moment, have been independent of foreign countries for our drugs and medicines, but we should be able to supply the wants of other lands; and more than this, our diseases would have been rendered less fatal, owing to improved methods of cure. Had the lamented Dana been spared to us, doubtless much would, ere this, have been effected, and many important discoveries made in this new department of our science. Such peculiar analytic talents, combined with such indefatigable industry and research, must have accomplished great results. It is worthy of notice, that whenever he is quoted by English writers, he is invariably styled *Monsieur* or *M. Dana*; as if American soil could not produce a skillful analytic chemist! We would therefore exhort every medical student about commencing his career, and every physician whose circumstances are favourable to such investigations, whether they aim at fame, or wealth, or usefulness, to cultivate vegetable chemistry.

But in the cultivation of our indigenous *materia medica*, there is danger, perhaps, of magnifying the virtues of favourite articles; and in some instances we have seen a blind attachment for specifics which do not exist in nature. Some of our physicians, who have the reputation of having paid great attention to this subject, and who are known as men of learning, and scientific teachers, are from this cause, confessedly among our poorest and least successful practitioners. Their minds, it would seem, have almost exclusively been directed to one branch of professional study, an important one, it is true, but still one which, if not connected with sound physiological and pathological knowledge, is as likely to lead to erroneous practice, as to serve as a guide to a safe and successful one. We see this exemplified in the case of the Thomsonian or botanic doctors, so called. Rejecting all other knowledge but that of "roots and herbs," they enter the field, fully prepared, in their own opinion, to combat disease in every form. With no knowledge of the

laws of health and disease, all morbid phenomena are merged together, and regarded as a unit; no possible circumstances are supposed to indicate a modification or change of treatment; high arterial action is raised still higher by the external application of steam; while the heart is urged to still more unnatural action, by the internal fires of lobelia and red pepper; the delicate tissue of the vital organs gives way, and sanguineous and serous extravasations are the fatal result.

In like manner, we have seen a regular practitioner of medicine, educated at a school where he is taught to believe that *sanguinaria* is a *panacea*, answering all possible indications; sudorific, deobstruent, expectorant, cathartic, emetic, diuretic, chialogogue, and even sedative. We have seen such physicians treat pleurisy and other inflammatory affections, without bleeding, or even free catharsis, relying on the supposed specific virtues of some vegetable hobby, to the neglect of those means which the experience of the whole medical world has proved to be efficacious in the removal of such diseases. In this way, the *asclepias tuberosa* has been brought forward as a specific for pleurisy; *sanguinaria* for acute and chronic catarrh, and a host of other maladies; *cohosh* for phthisis pulmonalis; *Indian hemp* for dropsy; and we notice in the appendix to the last No. of the London Quarterly Review, and the British & Foreign Med. Rev., the advertisement of a "SPECIFIC FOR FEVER," by Dr. Warburgh, long a resident practitioner of medicine in the British Colony of Demerara, and "known as a skilful and scientific botanist." From the accompanying testimonials signed by medical men, it would seem to be established beyond a doubt, that Dr. W. has discovered a most valuable sudorific, well worthy the attention of physicians in the treatment of remittent, intermittent, and perhaps other fevers; but to admit that it is a specific for all fevers, is more than we feel willing, with our present pathological notions, to do.

The flora medica of Lindley supplies a desideratum which has long been felt, both by the student as well as the teacher of medicine. Until this work appeared, there was no general work extant, which contained correct systematical descriptions of medicinal plants, grouped together under their natural orders, and so arranged as to secure the purposes of a text book. That the physician should have access to a botanical account of the plants which furnish the substances used medicinally in different parts of the world, is certainly a matter of no small importance; especially since there are so many conflicting statements respecting the sources from which medicinal articles are derived. We could give numerous examples of such from our standard authors on Pharmacology, were it necessary; it will suffice, however, at pre-

sent, to state that, of the few kinds of vegetable drugs admitted into the last edition of the Pharmacopeia of the College of Physicians of London, *twelve* are referred to plants which do not produce them, and *twenty-six* others have been assigned to their sources, with more or less inaccuracy.

It has been the aim of the author to include in his work all the plants, whether indigenous or exotic, and whether officinal or not, whose properties were sufficiently well attested to deserve particular notice. This, on the whole, has been accomplished with a great degree of success, though we perceive that some valuable medicinal plants of our own country have been omitted. If Mr. Lindley had been a medical man, and better acquainted with the properties of different vegetables, he would have probably executed his task more to our satisfaction, as he would have passed by some inert articles which he has now admitted, and would have given us more information as to the therapeutic application of the different substances which are known to possess active virtues, but the precise effects of which are not sufficiently understood, or explicitly pointed out. The author, however, has generally noticed at greatest length those plants which he supposes to be most important; while others are either very shortly described, or only mentioned by name. The technical descriptions, also, have been carefully framed in accordance with the existing state of botanical knowledge, and the most approved rules of modern science. The descriptions have been mostly borrowed from other botanists, in many instances altered and corrected; but under several articles, e. g. cinchona, croton, rheum, convolvulus, and others, there is much valuable original investigation. For the sake of convenience, the arrangement of the orders corresponds with that of the author's "Natural System of Botany," now well known in this country, through the instrumentality of one of our ablest botanists, John Torrey, Dr., who has increased its utility by adding a highly valuable appendix. The work contains a description of over 2,000 genera of plants; a great number of which, however, may safely be pronounced inert. Its chief value, and in this respect it is invaluable, will be found to consist in the correct botanical description of the different medicinal plants, serving as a model upon which the medical student may familiarize himself with the art of descriptive botany. If he expect to gain much information as to medical properties, he will be doomed to disappointment. In conclusion, we commend the work with great confidence to all who aim at precision and accuracy in medical science.

C. A. L.

Elements of Materia Medica and Therapeutics; including the recent Discoveries and Analyses of Medicines. Second Edition. By ANTHONY TODD THOMSON, M.D., &c. London, 1835. 8vo. pp. 1075.

THIS elaborate work of Professor Thomson is but little known in the United States, as its great bulk has hitherto prevented its republication. Its merits, however, justly entitle it to this honour. In copiousness, none except Pereira's certainly can compete with it; and in general accuracy of detail we know none superior. The author has successfully aimed to collect in one point of view all the discoveries with which modern chemistry has enriched the field of materia medica, and those practical facts which clinical medicine has furnished for elucidating the doctrine of therapeutics. Instead of commencing his medical education by attending lectures on materia medica, he thinks the student should previously attend, at least, one course of natural history, botany, chemistry, anatomy, and physiology, and then only will he be prepared to comprehend the doctrines delivered in a course of materia medica or therapeutics. Professor Thomson's work will prove a useful guide to the practitioner, as it includes the results of thirty years' attentive and close observation in the treatment of diseases. Materia medica must be considered as still in its infancy; but with what rapid strides would it progress, were medical men to imitate the author of this work, and faithfully record what they have carefully observed, separating facts from conjectures, and truth from misrepresentations!

Fifty pages, or the first part, is taken up with an account of the general action of medicines, which is more full and complete than we find in any other work. Part II. treats of the classification of medicinal agents, occupying some sixty more pages. In our notice of Pereira we have stated that this very copiousness has been considered a defect, obliging the student to go over ground which he has to traverse in other works, and while pursuing other collateral branches of medical science. It cannot, however, be denied, that there are some advantages attending it. It enlarges the view, and enables us to take a more intelligent and comprehensive grasp of the subject, when it is presented to us in all its bearings and all its relations.

The work of Professor Thomson will not admit of analysis; but there is one article which he has been chiefly instrumental in introducing into practice, to which we wish to call the attention of the profession, as from some late trials, we are induced to believe that it is

one of extraordinary power and efficacy. We mean the *ioduret of arsenic*; or according to the latest chemical nomenclature, the "hydriodate of the protoxide of arsenic." This medicine is easily prepared, by gently heating, in a tubulated retort placed in a sand-bath, a mixture of one part of finely pulverised metallic arsenic, and three parts of iodine; the iodide is afterwards to be sublimed, in order to separate the excess of arsenic; this compound is soluble in water. It may, also, be prepared by triturating together 37 parts of metallic arsenic, and 126 of iodine, or boiling these together, and evaporating the filtered solution to dryness. This medicine is one of the most powerful excitants in the *materia medica*, and must be given with great caution. It may be administered with the greatest advantage in obstinate cutaneous affections, in doses of the tenth of a grain, twice a day, gradually increased to one-sixth of a grain. As a local application, three grains should be combined with an ounce of lard. In corroding tubercular skin diseases, this application will prove nearly a specific.

In a late letter which we have received from Professor Thomson, he thus speaks of this remedy: — "I have lately made many experiments on the combination of iodine and arsenic, viz., iodide of arsenic; and have every reason for thinking that it will prove a most valuable addition to our *materia medica*. It operates on the capillary system as a powerful alterative, and it is the only substance which, in my hands, has ever checked the progress of incipient cancer. I have also verified its influence in the cure of impetigo of many years' standing." We commend this work of Professor Thomson, as in every respect worthy of his exalted reputation.

C. A. L.

A Flora of North America; containing abridged Descriptions of all the known indigenous and naturalized Plants, growing north of Mexico; arranged according to the natural System. By JOHN TORREY and ASA GRAY. Vol. I. Parts 1 and 2. New-York, Carvill and Co. July and Oct. 1838. 8vo. pp. 360.

WE hesitate not to pronounce this the most valuable and important botanical work hitherto attempted in the United States. It is an attempt to describe all the known plants in North America, and to conform the descriptions to the present improved state of botanical science.

This herculean labour has been undertaken by Professor Torrey, after many years of arduous preparation, and aided by every botanist of any note in the country; and the manner in which he has thus far executed

his task, is in the highest degree satisfactory. It is no disparagement to our other botanists to say, that no one could execute this work so well as Dr. Torrey. When completed, the work will comprise three closely-printed octavo volumes, of about 550 pages each. The first volume will include the exogenous polypetalous plants, and will occupy three parts, of about 184 pages each. Two parts have been published, and the third will appear soon after Dr. Gray's return from Europe, where he has gone to gather materials to render the work still more perfect.

We perceive that Mr. Nuttall, the distinguished naturalist, is an extensive contributor to the work. He has communicated to Dr. Torrey his notes and descriptions of the plants collected in his recent journey to Oregon and California, by way of the southern ranges of the Rocky Mountains. These collections are represented as very interesting, and comprise a large number of new genera and species, a considerable portion of which were obtained in a region never before visited by botanists.

The value of this publication would be greatly enhanced, especially to physicians, who are, after all, the chief patrons of such works, were the medical properties of the plants added to the technical descriptions. We sincerely hope that this omission will be supplied in the forthcoming numbers. This will not at all interfere with the main design and unity of the work, while it will render it an invaluable guide, or *vade mecum* to the physicians of our country, in investigating the virtues of our vegetable productions. Practical utility should never be lost sight of, even in the most technical and scientific productions. In this country, especially, such works must bear this character, or they will be but very poorly patronized, whatever their other excellencies may be. We hope that the able and indefatigable authors will take this matter under consideration, and if not inconsistent with their plan, comply with our suggestion. We wish them all success in their arduous enterprise.

C. A. L.

Chemistry of Organic Bodies. — Vegetables. By THOMAS THOMSON, M.D. London, 1838. 8vo. pp. 1076.

THIS work treats of a branch of medical science hitherto but very little cultivated in this country. But few have ever attempted its cultivation, and the profession has gone on administering drugs, without knowing, or apparently caring, to what principles their efficacy was owing. Some have even gone so far as to decry vegetable chemistry; but we

have never heard that those individuals proscribed quinine, morphine, strychnine, and many other important remedies, the product of chemical analysis. We admit that many articles, such as rhubarb, owe their peculiar properties to a combination of principles; and that these properties would be, in a great degree, nullified, or perhaps destroyed, by a chemical process; while at the same time we maintain, and have abundance of facts to support us in the opinion, that we are indebted to chemistry for many of our most valuable remedies, and that we are to look to her aid for still greater discoveries.

In this valuable work Dr. Thomson has aimed to lay before the public a pretty full view of the present state of the chemistry of vegetable bodies. Such a work was much wanted, *to post up*, to use a mercantile phrase, the results hitherto obtained by the different labourers in this wide-extended field. Within a few years past, particular attention has been paid to this branch of medical science in France and Germany, where several hundred new substances have either been discovered, or their characters determined with such precision, and their composition investigated with such accuracy, as to give a pretty accurate idea of their constitution and their connection with each other. But very few of the ultimate analyses contained in Professor Thomson's work have been made in Great Britain, and we are not aware of a single one made in this country, if we except that of *sanguinaria canadensis*, by the late Dr. Dana; all the rest have been made in France and Germany. If we recollect, Dr. Prout was one of the earliest British physicians who entered on such investigations, and it was only in 1827 that he published his analysis of sugar, starch, lignin, and some of the vegetable acids. Professor Thomson himself has accomplished more in this field than any other British chemist, though, lately, we perceive that several others have begun the investigation of vegetable bodies, particularly Dr. Gregory and Mr. Kane of Dublin, from whose experience, skill, and sagacity, we have reason to expect the most important results.

The work of Professor Thomson we consider defective in one very important particular, viz., it contains no minute directions of the best method to be employed for obtaining an accurate analysis of a vegetable substance. The author apologizes for this on account of the great and unexpected size to which his volume had swelled. We cannot, however, but believe that it would have been far more acceptable, had a few of the less important analyses been omitted, and their place supplied by detailing his mode of analysis. He, however, promises it in his next volume on "*Animal Substances*," which he is about issuing

from the press; but with all due deference, we think it would be out of place in such a treatise, as much an excrescency *there*, as its *absence* is a defect in the former. As another reason for this important omission, Professor Thomson states that two German chemists, Liebig and Dumas, have given very full details of their mode of analysis, together with accurate figures of the apparatus, so that every chemist who peruses it with care, will find no difficulty in analyzing any vegetable substance whatever. But every chemist cannot read German, and in this country, at least, it is difficult to procure German works when we can read them. We should feel highly indebted to Professor Thomson if he would give us his own mode of analysis, and also, if he chooses, a translation of the articles of Dumas and Liebig. We already have a translation of Professor Mitscherlich's work, and as to the analysis of Rose, Pelouse, and other French chemists, we will avail ourselves of the French journals for such information as they can give us. We hope in the next edition of his work Professor Thomson will supply the deficiency above-mentioned, though, as it is, no medical library can be complete without it.

C. A. L.

A Dictionary of Materia Medica and Practical Pharmacy, including a Translation of the Formulæ of the London Pharmacopæia. By WILLIAM THOMAS BRANDE, of her Majesty's Mint, Professor of Chemistry and Materia Medica to the Apothecaries' Company, Fellow of the Royal Societies of London and Edinburgh, &c. &c. 8vo.

FROM the well-known character of the author, and his position as Professor of the branches of which he treats, to the Company of London Apothecaries, we opened this volume with high expectations; nor have we been disappointed. The pleasure and profit derived from its examination have amply repaid us for the time and labour bestowed. The previous works of Professor Brande have won for him, both in England and America, an enviable reputation, as a man of science, which the present production is calculated to advance. His "Manual of Chemistry" has, for many years, been a text-book in most of our colleges and schools; and the "Dictionary of Materia Medica and Practical Pharmacy," though more unpretending in its character, will, we think, become the *vade mecum* of every physician and apothecary. It is a work essentially practical in its design and construction. It is not offered as an elaborate treatise on the materia medica, nor has it been the ambition of the author to promulgate new theories, in-

genious, but perhaps fallacious; pleasing the imagination, but misleading the judgement. He lays no claim to originality. He has followed the beaten path, but improved the road. The characteristics of the work are simplicity of arrangement and clearness of diction. It exhibits no redundancy of language, no scientific mysticisms, which only bewilder the inquiring student; conciseness and perspicuity having been the aim throughout. The arrangement, as the title indicates, is alphabetical; no classification is adopted. In connection with the botanic and therapeutic history of each article, are grouped together the various formulas for the officinal preparations of which it forms a component, or principal ingredient; so that at a glance we have the whole before us. As those only are given which are sanctioned by the London College of Apothecaries, some preparations are omitted which are to be found in the American Dispensatory. Upon examination, however, it will be seen that no important one is wanting. The work is rendered doubly valuable to the young and inexperienced practitioner, by the various recipes annexed to each article, embracing all the objects for which each is usually given.

Under the head "Abbreviations," Professor Brande throws out a hint which deserves more minute notice. "In Latin prescriptions," he observes, "many words, and sometimes all of them, are more or less abbreviated: but the custom is a bad one, inasmuch as it frequently leads to mistakes, and to a careless and slovenly mode of expression, and is often indicative of haste, or of ignorance. Young practitioners, especially, should write their prescriptions at length, as useful practice in Latin, and as obviating errors of the compounder; carefully avoiding, at the same time, all circumlocution and learned affectation of language." In these remarks we most heartily concur. Many instances have come under our own notice, in which the judgement of the apothecary alone has prevented a fatal mistake. An accidental flourish, or a blur in the paper, has transposed the mark $\bar{\omega}$ into $\bar{\xi}$ and this, too, when a powerful poison was the ingredient. The Professor's recommendation is certainly a judicious one, that the whole be written out distinctly, so that the risk of error on the part of the compounder be thereby lessened. We question much, however, the practicability of carrying out, in this country, the London plan of giving all the directions respecting the mode of using the prescriptions in the Latin tongue, though we highly approve of it. We approve of it because, in our judgment, there should be a common language used, understood alike by prescriber and compounder, independent of the vernacular language to which each may have been born. The present state of

the art of pharmacy in this country by no means warrants the belief that such is the case. That there are many druggists in our city, fully competent on this point, we freely admit. They constitute, however, but a small minority. The day, we hope, is not far distant, when the same can be said of all. The druggists in our leading cities are awakening to a due sense of their own importance in the community. The College of Pharmacy in Philadelphia has already led the way, and effected a vast improvement in the profession there, and her sister institution in our own city, though still in her infancy, struggling with difficulties, and but too much neglected by those who should cherish her, is exerting herself nobly in the cause.

Professor Brande, we are glad to see, insists most strenuously upon certain points which have been too lightly touched on in our *Pharmacopœias*. In the article "Tinctures," for example, he urges the importance of decanting and filtering the *whole* of the liquor from the dregs, so soon as the prescribed time for maceration has elapsed. This may appear a trivial matter, but it is, in reality, one of moment. For if the liquid be suffered to remain, and is only poured off as occasion requires, an article of various strength is at different times obtained. This is only one instance, out of many, which might be adduced, of the author's extreme attention to accuracy in officinal preparations.

One portion of the volume we have perused with regret, for, in a moral point of view, it may be productive of harm. In the article "Opium," Prof. B. enlarges, somewhat on the habitual and excessive use of this drug. An opinion has been lately broached by Dr. Christison of Edinburgh, which he attempts to establish by facts, that the daily and long-continued use of opium as a stimulant is not followed by those deleterious effects on the system which have been, heretofore, attributed to it. In this opinion our author appears inclined to concur, though he does not express himself with entire confidence. Still he rather advocates it, and goes so far as to say that laudanum might often be judiciously substituted for the wine, tea, and coffee, usually drunk. A faint approval, from so high an authority, carries with it full as much weight as a more decided one from an humbler source. Would it not have been as well to have paused for a moment, before advocating such a theory in a volume which will frequently fall into the hands of the young and inexperienced? There are many who are only deterred from the commission of an error by the fear that evil will ensue. Only convince them that may touch the "forbidden fruit" with impunity, and they will be easily induced to taste. Our author's remarks on this

subject are in striking contrast with those on alcoholic stimulants. The constant and excessive use of these he warmly reprobates, and gives a graphic statement of the wretchedness it entails on its unfortunate victim.

The volume, as a whole, we repeat, is an exceedingly useful one; and we earnestly hope that some of our enterprising publishers will be induced to array it in an American dress, so that it may come within the reach of every student, practitioner, and pharmacist among us.

W. H. M.

Essays on the most important Diseases of Women. Part I. Puerperal Fever. By ROBERT FERGUSON, M.D., &c. &c. &c.

ALTHOUGH several very excellent works have appeared, of late years, on the affections of women, we hail with great satisfaction the promise of a series of essays from the pen of Dr. Ferguson, a gentleman who by his talents and situation is peculiarly qualified to throw light on these important and interesting maladies. The subject matter of the first of these papers, — puerperal fever, — is of great interest, on account of the frequency of its occurrence, its occasional dreadful mortality, and from the diversity of opinion both as to its nature, and method of treatment as described by those authors who have written on it.

Dr. Ferguson distinguishes four forms of puerperal fever; the peritoneal, the gastro-enteric, the nervous and the complicated; and in the first chapter quotes the classification of other authors, as Clarke, Douglas, Tonellé, Gardien, &c. to show that these same distinctions, or very similar ones, have been recognised by them, and that where more numerous varieties have been laid down, they may very fairly be included in those he mentions. These distinctions are highly practical and well illustrated by a number of cases in the other chapters of the work; they show how absolutely necessary it is to discriminate carefully before we commence the treatment of what would appear almost to have been considered an entity under the term of puerperal fever. The now well-ascertained fact that this disease in one epidemic will be highly inflammatory or sthenic, in another typhoid or ataxic, while sporadic cases are of various types, explains why diametrically opposite treatment of "*puerperal fever*," has been recommended and insisted on by writers of great celebrity and undoubted talent, but who have not witnessed or discriminated the disease under its various forms.

Dr. Ferguson states under the head of "*peritoneal form*," that abdom-

inal pain in these cases is of two kinds, the one transient, and *if uncomplicated* easily removed; the other far more serious, durable, and dangerous. "In both, the intensity of anguish, the seat of the pain included between the pubes and a line drawn from the superior crest of one ilium to that of the other; the precursory rigour followed by the hot fit; the time of attack, from the first to the fifth day after parturition, are all the same, and neither the pulse nor the degree of fever distinguish the one from the other." The truth of these remarks will be recognised by every one accustomed to obstetric practice; it is frequently extremely difficult to discriminate between 'after pains,' and peritonitis; there is, in fact, no diagnostic symptom to guide us, and Dr. Ferguson reiterates the observation laid down by Dr. Gooch, that, in these cases frequently, our only criterion is *to observe the effect of remedies*. The transient, or what we may perhaps call the simulated disease, in general, yields readily to appropriate anodynes, while the other, requires such remedies as are used to quell pure inflammatory action: we particularly call the attention of young practitioners to cases of this description as they are of frequent occurrence; we have been long in the custom of breaking them by a dose of castor oil with a full dose of hyoscyamus, and dry heat to the abdomen. Dr. F., remarks p. 16: "In the epidemic of 1827—28, this form was so prevalent along the banks of the Thames, that, being worn out with the incessant calls to visit the patients at their own houses, I directed the matron of the hospital to send, in the first instance, to all complaining of abdominal pain, two doses of Dover's powders, each containing ten grains, one to be taken immediately, and the other in four hours; if, notwithstanding this, the symptoms should persist, they were directed to send for me. After this, I think I had no occasion to visit more than one in five of the afflicted, as they did not require any other treatment." If, however, the complaint did not yield in six hours, he considered it diagnostic of the true disease, and treated it accordingly.

Of the permanent form, or the true puerperal peritonitis, Dr. Ferguson offers nothing new—it is an exaggerated form of inflammation, and for its successful treatment requires the most decided antiphlogistic measures. "It has four distinct stages; the first, or preparatory, marked by a shivering, a hot and a sweating fit, lasting from one hour and a half, to six hours, during which there is a sense of severe disease, and often much agitation of mind. The second stage is characterized by abdominal pain, fever, general turgor, hard, frequent, and compressed pulse, supine posture, and restrained breathing." With respect to these symptoms, we would remark that very extensive peritoneal inflammation frequently exists *without pain*. "The third stage is that of effusion,

marked by an apparent amelioration in all the symptoms. The fourth is that of collapse, in which the countenance is changed; the respiration laborious; the surface cool, clammy, and slightly livid; the abdomen swollen; the pulse too frequent to be counted; the mind usually perfectly clear."

Second form, or fever with gastro-enteric irritation. — This variety, according to our author, assumes the general characters of a mild typhus, accompanied, from the commencement, with irritation of the mucous membrane of the intestinal canal; there is either no peritoneal affection, or it is very slight and transient, so as soon to be lost in the mass of constitutional symptoms which endure during the whole of the illness; it rarely terminates fatally without becoming complicated with some acute local affection; sometimes, it appears under a more exaggerated type, and we have an overwhelming and almost universally fatal typhus.

Third form, or nervous puerperal fever. — Dr. Ferguson remarks that this, in its pure form, is by far the most rare of the various kinds; although anomalous nervous symptoms frequently make a sudden attack during the existence of one of the other forms of this malady, and are characterized by "terror of mind, great coldness of the skin, much agitation, and by a sense of impending death from faintness and extreme prostration," all the puerperal symptoms are inconstant, irregular, and intense, while they last; the pulse is exceedingly rapid, and there is great restlessness and delirium which frequently gives way to fatal coma, or sudden syncope.

Fourth, or complicated form. — "This species is characterized by an appalling complication of symptoms, arising from the simultaneous or the rapidly successive attacks on distant organs and different tissues. It begins from the first to the third day with shivering, which very often, though not always, is followed by abdominal pain. The debility soon amounts to complete prostration. The mind is calm, and often wonderfully unconscious of danger. There is the rapid pulse and dusky skin of the second form, and the crimson patches on the cheeks which contrast so peculiarly with the dull glassy eye, encircled in lead-coloured lids. Sometimes the abdominal pain lasts during the whole of the brief period of the malady; sometimes it subsides in a few hours. Shortly after the abdominal attack, other organs begin to exhibit signs of disorder."

"In the majority of cases, the intestinal canal is the first of the secondary complications of disease, and then diarrhœa arises, which ends in dysentery, with tormina and bloody evacuations, or there is nausea terminating, at last, in coffee-coloured ejections." Afterwards, or coëta-

neously, the lungs, pleuræ, stomach, heart, eye, or even the cellular and muscular tissues are attacked, and either rapid gangrene or extensive purulent deposits take place; the pus is not contained in cysts, but is irregularly effused through the part attacked — the depositions of pus are not critical, but often “so sudden as to have led Dance to believe them not to have arisen from any inflammatory process; he describes them as occurring *à l’insçu du malade et du medecin.*”

Dr. Ferguson mentions an interesting fact, that has been observed by others, and which we ourselves have often seen, i. e. the connection existing between puerperal fever and erysipelas. “I may say that these two maladies are generally co-existent in our hospital, and that when the mothers die of puerperal fever, their infants perish of erysipelas.” He also mentions in another place the aptitude to attacks of erysipelas, of those who assiduously attend patients with puerperal fever.

“When this fourth form of puerperal fever is prevalent, and the characteristic of the epidemic, one in three dies in the London hospitals, I believe, under any treatment; and if the complications be many, this mortality will be still increased, and the most judicious and the most humane act is to shut up these receptacles forthwith. Such is the experience of William Hunter: — of those who have witnessed its plague-like ravages in the continental hospitals; — and such is mine. Happily, however, this form of puerperal fever exists with such fatality in hospitals alone. I believe that the single chamber of the pauper is more wholesome than the spacious ward of the hospital patient; while, in private practice, among the well housed, and well nourished, the milder forms are the commonest.”

The second chapter treats of the morbid anatomy of puerperal fever: Dr. F. gives the results of a great number of dissections, and quotes the tables of Dugés, Tonellé, and others; this chapter is worthy of attentive study, as it indicates the value of particular symptoms in estimating the danger; and also, as bearing on the question of in what consists the essence of puerperal fever? These inquiries are of such a nature that it is impossible to make an abstract sufficiently brief for the space allotted to us, we must therefore refer to the work itself.

In the chapter where the author treats of the nature of puerperal fever, he declares himself a decided humoral pathologist; he says: — “The three following propositions embody my views of the source and nature of puerperal fever.”

“1st. The phenomena of puerperal fever originate in a vitiation of the fluids.”

“2d. The causes which are capable of vitiating the fluids, are particularly rife after child-birth.”

“3d. The various forms of puerperal fever depend on this one cause, and may readily be deduced from it.”

Dr. F. proceeds to quote a number of very interesting experiments of M. M. Gaspara and Cruvelhier, illustrative of the effects of the introduction of pus and putrid substances into the circulation; these prove most clearly the power of the vitiated fluids to produce sudden and extensive morbid changes, both general and local; yet, notwithstanding, we are not prepared to admit with Dr. F. that they will produce all the varieties of puerperal fever; or that even a majority of the cases of this disease arise from the cause just mentioned; some are thus occasioned without a doubt, but others, we think, are caused by an *impression of some putrid substances in the uterus on the nerves of the part*, and in these instances, the malady ceases almost suddenly on the removal of the offending cause — we have seen several such cases, and even our author relates some. Again, our belief is that by far the greater portion of the cases of puerperal fever are produced by morbid action of the solids, i. e. inflammation of some of the tissues of the uterus (produced by injuries or cold,) and extending thence either continuously, or by contiguity, to the neighbouring tissues: — we think we are borne out in these views by Dr. Ferguson’s book, impartially viewed, and we much regret that we have not space to discuss this very important point more at large, but must content ourselves by thus briefly stating our opinion. The cases given by Dr. Ferguson are very numerous and highly interesting, and exhibit this malady in nearly all its varieties and gradations.

Treatment, where there is evident peritonitis, of course decided antiphlogistic treatment, must be had recourse to, — not only should we take blood from the system generally, but large numbers of leeches should be applied to the abdomen; we have always found especial benefit by the local abstraction of blood: Dr. F. suggests, what we have frequently recommended, viz: the application of a few leeches to the uterus itself; unfortunately we meet with violent prejudices against this treatment, although we are fully convinced of its value.

Where the symptoms of inflammation are not very prominent, no general rule can be laid down applicable to the majority of cases; regard must be had not only to the symptoms of each particular case, but the type of diseases prevailing at the same time should be considered; as what Sydenham has called the constitution of the year, considerably modifies both the nature of the disease and the success of any specific method of treatment.

Where there is much nausea and bilious vomiting from the commencement of the malady, ipecacuanha, given in sufficient doses to produce

emesis, has been found of great advantage, and this, when necessary, should be repeated twice or thrice — this is the celebrated method of Doulcet.

When purgatives are used, great care should be taken to select those that do not produce tormina; the mildest aperients should be given, guarded by some anodyne, as the griping arising from irritating purges has frequently been the exciting cause of the disease. The author gives a long and ample list of the remedies that have been recommended by various writers, but it is impossible for us at present to follow him.

Dr. Ferguson rates the mortality of puerperal fevers at one in three, but this calculation must rest principally on epidemic cases in hospital patients; we feel convinced that in private practice, except during the prevalence of very bad epidemics, with judicious treatment, a more favourable view may be taken.

At the end of the work there are three analytical tables of 205 cases treated in the general lying-in hospital, showing at one view all the most important particulars relating to them; these tables are very valuable, especially by pointing out the results of different treatment.

We conclude by cordially recommending Dr. Ferguson's work to the notice of the profession, and we trust it will not be long before we are favoured with the other essays of which he speaks in his preface.

J. C. B.

The Dublin Practice of Midwifery, by HENRY MAUNSELL, M.D.,
Member of the Royal College of Surgeons in Ireland, &c.

THE author of the work before us does not profess to write an elaborate treatise on obstetric medicine; he proposes, merely, to confine himself to the outlines of the science, leaving to others the task of more extended inquiries. There is much to commend in Dr. Maunsell's Manual; its arrangement is good, and there are scattered through its pages, practical observations of a high character. He seems to have confined himself almost entirely to facts connected with bed-side practice; and this we hold to be the only efficient mode of writing profitably on a subject so copious in practical results as the science of midwifery.

Although, on the whole, we are willing to adopt the views of Dr. Maunsell, yet there are certain opinions promulgated by him, which, in our judgment, cannot be sustained. In the chapter devoted to the discussion of the "mechanism of parturition," he has certainly erred in stating the cardinal principles on which this beautiful process is based;

and we are the more anxious to admonish our readers of the fact, because a misconception of the laws governing the mechanism of labour will inevitably lead to the most disastrous results in practice.

Dr. M. adopts, in full, the views of Professor Nägele respecting the mechanism of labour in head presentations. At page 27, he observes: "In describing the mechanism employed in head presentations, I have adopted the opinions of Professor Nägele, being convinced of their general correctness. The student, however, is not to be disappointed if he should find himself unable to diagnose the *exact* position of the head in every individual case. It is, in fact, often extremely difficult to do this; and in attempting it, we are by no means warranted in inflicting any pain on the mother. A failure is of the less consequence, as the whole tenour of the facts ascertained by the excellent observer alluded to, goes to *discountenance the idea of its being ever necessary or expedient to change the position of the head.*"

Professor Nägele is certainly high authority, and the earnestness with which he puts forth his peculiar opinions, might to some, be a guarantee of their truth. Much, however, as we respect the fine talents of the learned Professor, and willing as we are to believe him sincere, yet we cannot admit the accuracy of his propositions, because, in our humble judgement, they will prove fallacious when brought to the test of practical experience.

For want of space to enter more into detail upon this subject, we shall confine our remarks to the proposition contained in the preceding extract, and which it will be perceived has been adopted by Dr. Maunsell. So far from its being "*never necessary or expedient to change the position of the head,*" we contend that the accoucheur who is well grounded in the principles of his art, will frequently have it in his power, by timely and judicious manipulation, not only to abridge the duration of labour, but likewise to save the life of the child, and often to preserve the mother from much physical injury.

For the purpose of illustration, we call the attention of the reader to the various presentations of the vertex at the superior strait of the pelvis. Baudelocque, as is well known, made six presentations of the vertex, while others have thought proper to increase or diminish this number. The occiput is found at one of the acetabula far more frequently than it is at either of the posterior points of the pelvis. The anterior wall of the pelvis, which consists of the length of the symphysis pubis, is only one-third the length of the posterior wall which is composed of the length of the sacrum and coccyx. Now when the occiput is situated opposite either acetabulum, the labour, *ceterus paribus*, will be only one-

third the duration that it is when the occiput corresponds with either sacro-iliac symphysis, for the simple reason, that in the two former positions, it has to travel but one-third the distance it has to traverse in the two latter. But we will go farther, and state, that when the occiput is situated posteriorly, unless the head should be small, or the pelvis large, it will frequently be necessary to have recourse to the forceps. And according to the experience of some of the most accurate observers on the Continent of Europe, the woman, if left to her own unaided efforts, will in seven cases out of ten, be delivered of a still-born child.

We are not advocates for officiousness in the practice of midwifery. We have been too often called to witness the melancholy consequences of over action, not to use every effort in our power to enforce upon the recollection of the student, the absolute necessity of respecting, so far as safety will justify, the powers of nature. But there is a broad distinction to be made between officiousness and prudent interference, and this should always be kept in mind by every one who intends to engage in obstetric practice.

When labour has fairly commenced, it is the duty of the accoucheur to examine attentively *per vaginam*, with a view to discover the precise conditions of things at the upper strait. How is the mouth of the womb? Is it dilated, and to what extent? What is the presenting part, and how does it present? Is the pelvis such as will allow the child to pass without artificial aid? These are the cardinal points to which the attention of the physician must be directed at the commencement of labour; and they should not be neglected until such progress has been made in the descent of the presenting part, as will preclude the possibility of salutary assistance. Suppose, then, that on examination it should be discovered that the occiput, instead of corresponding with one of the acetabula, is situated opposite either sacro-iliac symphysis. Would it, after what has been said, be correct practice to "discountenance the idea of its ever being necessary or expedient to change the position of the child's head?" We think not. Under these circumstances, as soon as the mouth of the womb is sufficiently dilated to permit the introduction of the two forefingers and thumb, the practitioner, steadying the uterus with the other hand, should proceed with the utmost caution, by placing the two fingers on one parietal bone, and the thumb on the other, to move the head gently upwards, in order to cause an approximation of the chin and sternum, and then, with great care, gradually bring the occiput from the right sacro-iliac symphysis to the right acetabulum, or from the left sacro-iliac symphysis to the left acetabulum. By this simple manipulation the labour will be abridged one-third, and the chances for the birth of a living child will be increased at least ten-fold.

We cannot better close this brief review than by an extract from one of the most practical writers of the age, to whose kindness and personal instruction the writer of this article owes all that he may know of obstetric medicine. In speaking of the two posterior presentations of the vertex, Capuron observes: "Nous avons toujours été obligé de terminer l'accouchement avec le forceps, lorsque la tête de l'enfant et le bassin de la mère avaient leurs dimensions naturelles ou normales. Dans le cas, au contraire, où l'accouchement se terminait par les seuls forces de la nature, le travail en était souvent très long, ce qui entraînait quelque fois la mort de l'enfant ou la déformité de la tête; alors aussi le bassin était toujours plus large, ou l'enfant moins volumineux, qu'à l'ordinaire, ou ces deux avantages se trouvaient réunies."

Cours Théorique et Pratique d'Accouchm. par J. Capuron, p. 200.

G. S. B.

Lectures on the Principles and Practice of Midwifery. By JAMES BLUNDELL, M.D. formerly Lecturer on Midwifery and Physiology at Guy's Hospital. Edited by CHARLES SEVERN, M.D, Registrar of the Medical Society of London. London, 1839. 12mo. pp. 568.

WE regard the appearance of this publication with mingled feelings of satisfaction and regret. The value of the Lectures of which Dr. Severn professes to give the substance, is so well established, that all cannot feel otherwise than satisfied, that through this additional channel they are brought within reach of the profession. The regret, on the other hand, is caused by the fact that these Lectures are issued to the public, even too a second time, not by the author himself, but by a mere editor, who owes his possession of them to the aid of a skilful stenographer. We trust it will not always be so; but that at some future day, we may see a systematic Treatise on Midwifery, by one who is so abundantly competent to furnish a book of the highest order, as Dr. Blundell. In the mean time, these Lectures, even in the form in which they are now furnished to us, may well be in the hands of every practitioner of Midwifery. Independently of the positive precepts of practice in which they abound, they possess a peculiar value in containing incessant cautions against improper and unnecessary interference in cases of Midwifery. These cautions cannot be too often repeated, nor too urgently made. The horrible mischief done by "meddlesome Midwifery," as Dr. Blundell quaintly calls it, in the hands of the ignorant and the rash, exceeds probably that of any other department of our pro-

fession. The vivid pictures of bad practice every where interspersed in these Lectures, and the expressive mode in which the student is warned against such errors, cannot be forgotten by those who have had the good fortune to hear them. Although, as now presented, much of the raciness and point which Dr. Blundell's peculiar manner gave to his oral instructions, is necessarily lost, sufficient is retained to give a good idea of his excellence as a Lecturer. We repeat, therefore, that we welcome the appearance of this publication with great satisfaction.

E. D.

Traité pratique des Maladies Vénériennes, ou Recherches critiques et expérimentales sur l'Inoculation, appliquées à l'Etude de ces Maladies, suivies d'un résumé thérapeutique, et d'un formulaire spécial; par Ph. Ricord, Docteur en Médecine, &c. &c. Paris, 1838. pp. 808.

WITH several wards of a hospital in a large city like Paris, devoted exclusively to the reception of patients with different forms of venereal disease, the profession cannot but look with interest to a work from the pen of so experienced, so enthusiastic, and we may add, so honest an observer as M. Ricord; while those who have witnessed his frank and candid manner, and have watched the skill and the success with which he manages this branch of practice, will attach additional value to this fresh proof of his industry, and ability. Disclaiming all theory, he stamps the title-page of his work with the noble sentiment quoted from Cuvier, that the discovery of the truth is the only end worthy of being kept in view.

The first and the larger part of the present work, contains the results of the author's experiments in the inoculation of the different kinds of venereal matter, and while it embodies a lasting testimonial to his industry and perseverance, proves incontestably, that the matter of the chancre will produce its like when inoculated on any part of the body, a fact which, at the same time that it settles the long contested question as to the existence of a specific virus as the cause of this disease, furnishes a valuable aid in the diagnosis of venereal sores. Whether this means of diagnosis will ever be made available by practitioners in general, and whether a too fond dependence on it under such circumstances might not lead to unfortunate results, is a question of more difficult decision.

M. Ricord alludes to the discrepancy, and indeed contrariety of results among authors respecting the artificial inoculation of syphilis, and thinks an abundant explanation of them may be found in the mistakes of some, the ignorance of others, and the bad faith of the majority.

The inoculation of venereal matter has been used since the time of Hunter for the following purposes :

1. To prove the existence of a special virus ;
2. As a means of diagnosis ;
3. To distinguish between the consequences of primary disease, and those of constitutional infection ;
4. For therapeutic purposes, either to test the efficacy of preventive means, or to modify an old taint by a fresh infection, or to produce such a modification of an incurable disease as will bring it within the influence of special treatment ;
5. For purposes of hygiene, and of legal medicine.

Our author, therefore, studies the subject under these points of view in the first part of his work ; and in the second part, supports his positions by numerous detailed cases of inoculation of matter from different forms of primary syphilis, with results ; his third part is rich with therapeutic principles and modes of practice, founded on a most extensive experience under the most favourable circumstances, and concludes with a formula-ry of the different remedies which he is in the habit of using.

The doctrine of a specific virus as the cause of syphilis, though admitted by the majority of writers on the subject, has been denied by some, and both parties have appealed to inoculation in proof of their side of the question. Our author recapitulates with considerable fulness, the different theories of the cause of syphilis and its mode of propagation, which have prevailed at different periods, and also furnishes a clear and complete review of all the leading opinions on the subject of inoculation from the earliest period at which it was first tried. Into a detail of these, our limits will not permit us to enter.

Nor do all who believe in a specific virus, yield equal credence to the capability of its inoculation. Lagneau attributes the discharge produced by the introduction into the urethra of a catheter smeared with the matter of gonorrhœa to mechanical irritation, and Cullerier, (uncle,) thought that the fluid which serves as a vehicle for the virus, should be endowed with a certain degree of vitality to ensure its effects.

The following seem to be the principal arguments which have been advanced against inoculation :

1. The negative or uncertain results of those who have practised it ;
2. The inertness of matter from *secondary* ulcers, which should be more active, from the greater degree of infection ;
3. If there be such a thing as general infection, a fresh infection should be impossible, from the impossibility, according to Hunter, of the existence of two diseases in the system at the same time ;

4. The contagious property of venereal secretions depends not on the nature of the pus, but on the degree of inflammation of the part furnishing it ;

5. The pus of gonorrhœa, which is a milder affection, should not be capable of inoculation ; the contrary of which seems to be proved by the experiments of Hunter.

Our author discusses these several points, and exposes their flimsiness and their fallacy. He also satisfactorily answers the objections advanced by M. M. Cullerier, and Ratier in their article " Syphilis," in the Dictionary of fifteen volumes, and quotes from their own article on " Inoculation " in the same work, the opinion that the inoculation of matter from a chancre or primary ulcer produces a morbid phenomenon which is constant in its form, and regular in its progress and duration, and which furnishes a pus, susceptible, in its turn, of being communicated by inoculation.

The difficulty with writers on the subject before the time of M. Ricord, seems to have had its foundation in the want of a sufficient number of accurate observations, from which to make their deductions. Experiments in inoculation were liable to the contingency of being imperfectly or unskilfully performed, or to the objection of having been made with reference to some preconceived theory or notion. Authors, also, were too fond of quoting results from wholesale statements of experiments, without any detail of the cases, or any guarantee of their accuracy and true value, or of arriving at hasty conclusions, from a small number of cases, which could perhaps not bear the most rigid scrutiny. Among these was Devergie. Our author, however, has laid a broad and deep foundation for his positions in the result of numerous experiments, made with the greatest caution, and observed with the greatest accuracy for several successive years, in a field which is surpassed by none for facilities, and open to the inspection of all ; and it is his rich collection of facts, gathered under so favourable a combination of circumstances, which stamps his work with such a value in the eyes of the inquirer after truth. As must necessarily be the case, the result has confirmed some, and destroyed others, of the conclusions often too hastily drawn by preceding writers.

The necessity of some other diagnostic mark of a syphilitic sore than is at present known, must be felt by all who have experienced the uncertain evidence afforded either by seat, form, sensibility, appearance, progress, or treatment, all of which are liable to so many modifications as to keep us often in doubt, and we shall therefore hail with pleasure the prospect of a sign so simple, incontestable, and pathognomonic, as in-

oculation claims to be, without having to refer for the certainty of our diagnosis to a train of secondary symptoms, which are always annoying, frequently lead to exposure, and are sometimes fatal in their consequences.

Our author condemns, with justice, the exposure of a healthy person to the virus of syphilis by artificial inoculation, for the sake of science. He has repeated his experiments on several kinds of animals in different ways, with the greatest care, and with pus which had produced positive results in man, and always without the least effect; and hence concludes, that the inoculable principle is peculiar to man, and cannot be communicated to brutes.

He lays down the following propositions as the basis of his observations:

1. A *previous* venereal infection, whether already cured, or still existing, does not prevent a fresh infection, in any stage of its progress; and the number of possible successive infections is without limit.

2. Primary symptoms never appear in an individual actually infected with secondary symptoms, or with primary symptoms alone in a certain part, without either fresh contact of matter from the primary sore, or its communication by another individual.

3. Secondary symptoms never prevent the attack of fresh primary symptoms.

4. The frequency in the occurrence of secondary infection bears no direct relation to the number of primary sores at the commencement.

It was a remark of Hunter, which is verified by daily experience, that a first infection does not prevent a second.

The last of the preceding propositions, on the infallibility of which depends the authority to pursue such researches, and according to which, a patient is no more exposed to secondary symptoms after two, three, four, or five chancres, *contracted at the same time*, than after a single one, M. Ricord says, is based on facts derived from an experience of six years, and admits of no doubt.

The investigations of our author lead him to consider chancre as the consequence of a specific pus, secreted by itself alone, and which produces a disease identical with itself, wherever deposited, under circumstances favourable for such a result. *Seat* has so little to do with its specific nature, that it cannot be considered as peculiar to the genital organs, but every part is liable to it, and wherever developed, on the end of the finger, or the thigh, the tongue, &c., it preserves all its characteristic marks, without exception.

This specific pus is only furnished by a chancre during its increasing

or its stationary *ulcerative* stage, and not during the stage of *reparation*, a distinction of practical importance, the neglect of which has, probably, given rise to much of the uncertainty and controversy which have existed on the subject.

For an accurate and graphic description of the pustule of inoculation during its progress, we must refer to the work itself. The results of inoculation are so regular, and so constant, that M. Ricord has been led to lay down the following propositions :

1. A chancre can be recognised at first sight and absolutely, only by the pus it secretes, and the infection to which this pus may give rise, a secretion which is always identical, and always followed by the same general results.

2. The pus of a chancre alone will produce a chancre.

For the production of a chancre, there is no necessity for venereal excitement, nor for the venereal act, nor for any previous excitement of the part to be inoculated.

There is no limit to the reproduction of chancres with bad management. Every insertion of matter is followed by a pustule, and this by a chancre, and on the exact spot, and no where else.

It results from his experiments that chancre is always a local disease at its commencement, and that ulcerations, completely destroyed by caustic or otherwise, during the three, four, or five days following the application of the cause, do not expose the patient to secondary symptoms. Also, that the indication of chancres commences about the fifth day, and until this takes place, there is every reason to believe the disease to be only superficial. Indurated chancres are those most liable to be followed by secondary symptoms.

M. Ricord follows the division of syphilitic symptoms into primary and secondary, so universally recognised, and commences by bringing to the test of inoculation the forms which belong to the first order, *blenorragia*, *chancre*, *primary bubo*, and *mucous tubercle*, or *flat pustule*, as it is called, which may be either a primary or secondary symptom.

The great service rendered to the profession by our author in affording us the aid of the speculum uteri in our examinations of the female organs of generation, and the light thus thrown on some points before involved in much obscurity, and the source of much error, is familiar to all our readers. In the numerous cases which he has examined, he has never found a chancre communicated by a discharge, without ulceration of the genital organs at the same time, and this result is also confirmed by inoculation. Nor will the matter from the erosions and ulcerations of the vagina or neck of the uterus, which not unfrequently accompany

blenorrhagia, communicate true chancre by inoculation any more than the purulent secretion without ulceration. From this he feels himself authorized, by the strictest analogy, to conclude, that whenever a gonorrhœal discharge from the urethra communicates a chancre to a female, there is, besides this affection, a chancre in some portion of its extent.

His experiments authorize him to say, that the matter of blenorrhagia will produce chancre under no circumstances whatever; it may give rise to excoriation, like any other irritant, but can never develop a specific ulcer. Also, that constitutional syphilis is never the effect of blenorrhagia; the diagnosis in the cases in which this was supposed to be true, not having been accurate, and the affected surfaces not sufficiently examined, and that the only exact mode of diagnosis, in the present state of science, is inoculation.

The experiments of our author entirely controvert the idea of a plurality of poisons, and prove that the different forms of syphilis depend on causes foreign to the specific cause, as the constitution of the patient, preceding or accompanying diseases, his general health, and the previous local or general treatment. Phagedenic sores may be communicated by the mildest form of ulcer, and hence, the opinion maintained by some, that a severe form of disease is the effect of a form equally severe, is entirely without foundation.

Inoculation also enables the difference between those two distinct periods of chancre, ulceration and reparation, to be well established. The specific ulcerative period is without limit in its duration, as long as the character of the primary sore is preserved. Ricord has inoculated with success the matter of ulcers eighteen months old.

Of the different forms of *bubo*, our author says, that the one resulting from the absorption of the pus of chancre, is entirely analogous to chancre in its nature, and only differs from it in form, and in seat; that it is the only kind capable of giving rise to the characteristic pustule; also, that inoculation is the only infallible and pathognomonic diagnostic mark between the different kinds of *bubo*; and that those buboes which are not capable of being inoculated, (when the operation is properly performed,) are never followed by secondary symptoms, and hence, are not syphilitic, and that this test should always be applied in the suppurating stage of those buboes not preceded and unaccompanied by other symptoms, or *bubons d'emblée*, as they are called by the French.

His researches have led to the establishment of a most important practical distinction between *superficial* and *deep-seated* buboes, which proves that the difference between these two orders of glands so much insisted on by Desruelles should be carefully kept up, this is, that ab-

sorption from a chancre on the genital organs only takes place in the *superficial* glands, and most frequently in only one at a time, although several of both orders may be inflamed or swollen at the same time. *Deep-seated* buboes very rarely suppurate, and when they do, the matter is never capable of being inoculated, unless infected by specific matter from a neighbouring chancre, or superficial gland, as they are never infected by absorption. M. Ricord says, that it may be positively stated, that the absorption of virulent pus, preserving its power of being inoculated, never passes the first gland in the direct line of absorption with the chancre which precedes it.

The matter from a lymphatic vessel which has suppurated in consequence of absorption of pus from a chancre, is capable of being perpetuated by inoculation, as is also that from an abscess in the cellular tissue which has been infected by infiltration of matter, from a similar source, beneath the skin.

Our author admits the occurrence of syphilitic buboes, without any other precursor than a suspicious connection, and without accompanying syphilitic symptoms, or *bubons d'emblée*, and quotes several striking instances of the kind. He says that they appear most frequently in the deep-seated glands, and, what is remarkable, never furnish an inoculable pus, and that he never saw a bubo with all the rational signs of this species, the pus of which would produce the characteristic sore, and that after the most careful observation, he has never known them followed by constitutional symptoms.

The symptoms known under the different names of *mucous tubercle*, *mucous pustule*, *flat pustule*, &c. &c. which has been considered by some as a primary, and by others as a secondary symptom, and which seems to be a sort of connecting link between the two, has always given a negative result in many varied forms of inoculation which M. Ricord has practised. He has sketched with much clearness several interesting points connected with this symptom, which deserves a careful study. He arrives at the conclusion that it cannot be communicated by inoculation; that it belongs to the class of secondary symptoms, and is a proof of constitutional infection; that when syphilis has been communicated by a person with this affection, it is because there was, at the same time, some other affection specifically contagious; and that, like other secondary symptoms, the true mucous tubercle can only be communicated through the constitution.

The experiments of Ricord fully establish the results of Hunter, that secondary symptoms cannot be communicated by inoculation. Many good observers who have agreed on this point, have still been deceived

by symptoms which, from their seat, or time of appearance, seem at first sight to depend on a general infection, as primary ulcers of the lips, tongue, and even of the pharynx, which have been communicated by direct contact, and are inoculable ; this is especially the case with primary affections of the anus, the true origin of which patients are very apt to conceal.

From his experiments on this point, two conclusions of some practical value are to be drawn :

1. A symptom does not cease to be syphilitic because it is incapable of being inoculated ; for, though it has lost this property, it may still be hereditarily transmitted.

2. Every symptom capable of being inoculated is the result of *direct contagion*, and not of *general infection* from absorption of virus ; and hence, affords no proof of *constitutional infection*.

M. Ricord quotes some experiments from M. Calderon to prove the prophylactic power of certain agents in the communication of syphilis, and enumerates several articles which have the power of destroying the virus, for which we must refer our reader to the work itself.

As to the *therapeutic* powers of syphilitic inoculation, to which but a few remarks are devoted, they are, to say the least, of doubtful advantage, and find no warrant in the present state of science. In summing up his remarks on the light afforded by inoculation in deciding upon the course of treatment to be pursued in a given case, M. Ricord says, that to those who believe in the necessity of mercury in the treatment of primary syphilis for its radical cure, and who think that it ought not to be given indiscriminately, inoculation is doubtless the only infallible touchstone in every instance in which it is properly used, and that, if at some future day, that remedy is better appreciated, or some absolute specific for syphilis is found, inoculation will test its value, and point out the proper cases for its employment, and that, even in the present state of science, it affords important aid in the prognosis, by proving that *every individual who has had inoculable symptoms, is liable, at a later period, to constitutional symptoms*.

M. Ricord thinks that inoculation may also prove of service in legal medicine, both in aiding to clear the innocent, and in assisting in the detection of the guilty.

The second part of his work consists of a detail of numerous cases, traced through the different stages of their course, in which inoculation of different kinds of matter was practised, with the results ; at the close of which are the statistical tables of the cases on which his conclusions are founded. From these we learn, that in 748 cases of *primary* syphilis

in males, and 301 in females, making 1049 cases in the whole, the characteristic pustule followed inoculation; while in 62 cases of symptoms of the *transition* class (or chancres during the stage of reparation,) 399 cases of *secondary*, and 57 cases of *tertiary* symptoms, in both sexes,* no such result followed the introduction of the matter. The same negative result was witnessed in 985 cases of venereal affections in both sexes, not dependent on specific virus, as sympathetic buboes, acute and chronic blenorragia, vegetations, &c. He also gives 74 cases attended by negative results in diseases entirely foreign to the venereal, as ulcers, and abscesses of different kinds, cancer, &c. The value of these results he strengthens by those obtained by M. Mairion of Louvain, in 257 cases, during the year 1836, which perfectly agree with those of M. Ricord in all essential particulars.

The therapeutic summary which forms the third and last part of M. Ricord's work, is not intended to embrace the whole subject of the treatment of syphilis, but only to point out the practice which he has found the most effectual. He therefore details minutely the indications by which he is governed, without entering into the history of the symptoms.

He recognises two distinct orders of venereal diseases; chancre, of which the venereal virus is the cause, and to which the name of *syphilis* should be restricted; and *pseudo-syphilis*, or affections not virulent, as blenorragia and its consequences, simple ulcerations, phymosis, paraphymosis, &c.

He premises this part of the subject with the prophylactic treatment of primary venereal symptoms, in which he presents a plan for the general diminution of the disease, and gives directions for individual protection from exposure.

His opinion is that, although the primary syphilitic sore frequently heals without any treatment, and even under much that is improper, still, every effort should be made to destroy it at first, and in every case, to lessen its duration.

He lays it down as a rule, that "chancre at its commencement, whatever may be its form, *imperiously demands the abortive method of treatment*," and says that no authentic observation exists of ulcers destroyed before the first 5 days after infection, which have given rise to secondary symptoms, if these ulcers are the only symptom, and were uncomplicated.

Three modes have been proposed for the destruction of chancres; excision, actual cautery, and mediate or perturbing cautery.

Hunter thought *cauterization* preferable to *extirpation* when the sore is on the glans penis, because this is less sensitive, and less exposed to

* By *tertiary* symptoms, M. Ricord means nodes, deep-seated tubercles, periostoses, exostoses, caries, necroses, syphilitic tubercles of the brain, &c.

hemorrhage; while excision is to be preferred when the sore is on the skin. M. Ricord thinks the subject can be settled with more precision by studying the differences presented by chancres at their origin, and hence considers them under the head of 1st, original pustule; 2d, ulceration, or *chancre d'emblée*; 3d, virulent abscesses.

1. *Original pustule*. — This form, which is the one most rarely met with, and which may easily at first be confounded with eczema or herpes, when attacked early, is destroyed by cauterization properly performed. He says, whenever, within a few days after a suspicious connection, a pustule is found on the parts exposed, *whatever may be its nature, and without insisting on an accurate diagnosis*, the parts forming its base must be divided and cauterized deeply. The importance of preventing the developement of a chancre more than counterbalances the slight pain inflicted in cauterizing a herpes or eczema. The caustic to which he gives the most decided preference is the nitrate of silver in pencil, pointed so that it can be insinuated under the edges of the ulcer left by the rupture of the pustule.

When seated on tissues movable and easily isolated, he would prefer excision if patients were not so very averse to it. This operation must be performed with curved scissors, and must include the removal of some of the sound tissue, cutting out a little too much, rather than not enough.

2. When *ulceration* has taken place, which is the most common form, the abortive treatment is the same as in the primary pustule, either cauterization or excision.

3. *Virulent abscesses*, or chancrous sores following abscesses which have been preceded by inflammation, and are seated in a follicle, in the cellular tissue, in a lymphatic vessel, or a gland.

When there is engorgement of one or more follicles, excision must be adopted without hesitation, and followed by the application of the nitrate of silver. The same treatment must be adopted in follicular abscess of limited extent; but when more extensive, the abscess must be punctured to discharge its contents, and its cavity thoroughly cauterized. The same is true of small circumscribed abscesses of the cellular tissue near a chancre, caused by absorption — when seated in lymphatic vessels or glands, they must be treated like buboes.

But besides the application of the nitrate of silver in this way to produce the *abortion* of chancres, M. Ricord lays it down as a rule founded on daily experience, and which he cannot too often repeat, that, whatever the time which may have elapsed, or the form in which a chancre first appeared, provided its seat and extent do not forbid, it must be de-

stroyed as rapidly as possible. He says that in the cases of constitutional affection which he has collected, the chancres had never lasted less than 10, 12, or 15, days, in the rarest number of instances; and that, in the great majority, they had lasted 3, 4, 5, 6 weeks or more. Hence he concludes that the treatment, whatever it may be, which cures the local disease the most speedily, is decidedly the best anti-syphilitic.

When the surrounding tissue is in the least engorged, or the chancre has reached a certain limit, the action of the nitrate of silver does not extend deeply enough, and excision is preferable. In such cases, M. Ricord had been very successful with caustic potassa, and still more so with Vienna paste, a combination of a solution of potassa in alcohol with quick-lime, for the preparation of which he gives a formula. The latter he prefers: it requires to be used with caution, and not to be applied more than a line or two beyond the part affected, and there are circumstances in which its application would be improper.

When the preceding means cannot be used, or do not succeed in destroying the specific character of the sore, certain cautions must be observed in treating it.

As the presence of the secretion is a cause of the disease constantly in action, it must be removed by repeating the dressings according to its abundance, 3 or 4 times a day.

Scabs should also be prevented from forming, as they afford an opportunity for the matter to burrow.

Cauterization with nitrate of silver must be repeated as long as any part of the chancre remains in the ulcerative stage; but should never be applied to parts in the stage of reparation.

Greasy applications, and especially mercurial ointments, are injurious, and frequently cause the diseased part to extend, or to become inflamed.

At the same time that means are used to prevent the contact of the matter secreted by a chancre with the sound parts, measures must also be employed to diminish that secretion. For this purpose M. Ricord is very partial to *vin aromatique*, a preparation of red wine with several aromatics, of which he gives the proportions at the end of the work. This, he says, diminishes the secretion, favours cicatrization, and by operating as an active astringent, prevents the possibility of inoculation. The watery extract of opium may be added to this, in the proportion of 8 or 10 grains to the ounce, when the pain is severe; the addition of tannin to it is also useful when the purulent secretion is abundant.

The diet and regimen must be regulated according to the constitution of the patient.

M. Ricord makes 3 forms of chancre in a therapeutic point of view:

1. *Masked chancres*, ("chancres larvés") or chancres seated in the urethra, vagina, and inferior parts of the rectum or anus.

2. *Superficial chancres*.

3. *Phagedenic chancres*: of these he makes three varieties:—
 (a) *pullaceous plastic*, a form which he considers as most frequently connected with derangement of the digestive organs. (b) *Indurated*.
 (c) *Gangrenous*, from excess of inflammation.

He enters into the details of the applications suited to these different forms, in all the varied phases which constitutional or local causes may impress on them, with a tact which proves that they are as familiar to him as names of household things, and with a minuteness which our limits forbid us to attempt to transfer to our pages.

He recognises the principle acknowledged and acted on by the most judicious practitioners of the present day, and the truth of which, indeed, the experience of anti-mercurialists themselves establishes, if possible, on a still more firm basis, that mercury, if not absolutely essential to the cure, is the most speedy and the most effectual means of controlling the form of chancre, accompanied by *induration*, and also one form of the plastic phagedenic chancre.

In the treatment of *bubo*, our author remarks, that whatever may be its seat, or its depth below the surface, rest, with systematic compression, will discuss it in a large proportion of cases. He has often observed, that in those who wore trusses for hernia, buboes very rarely appear on the side where the compression is made.

When the attempt at discussion by this means fails, he recommends, in some cases, covering the bubo with a small blister, and afterwards applying to the denuded surface a pledget of lint dipped in a solution of 20 grains of bi-chloride of mercury to an ounce of distilled water; this application to be continued 2 or 3 hours. This produces an eschar, is an irritating and painful process, and, besides, is liable to the serious objection of leaving an indelible mark; and hence, will rarely be submitted to by the patient, and is, probably, very seldom advisable.

In buboes, following simple blenorrhagia, excoriations, &c. where the tendency to suppuration is but slight, he recommends the solution of acetate of lead, solution of muriate of ammonia, iodide of lead with conium, simple poultices, &c., with entire rest; and when there is pain, leeches, followed by emollients and narcotics, and especially, the free use of laudanum locally.

When we fail in producing the resolution of a bubo, the indications of treatment are derived from its state, whether acute or indolent.

When febrile excitement exists, bleeding from the arm may be requir-

ed, together with leeches about the base of the tumour. When there is no constitutional disturbance, leeches alone will answer, and it is always better to apply too many than too few ; 20, 30, 40 — at the same time, general warm baths must be used (not *local*, which are injurious in such cases) with emollient poultices, and entire rest, placing the limb of the affected side in a state of flexion to diminish the tension of the aponeuroses. These measures must be accompanied by low diet, cooling drinks, and saline purgatives. Mr. Ricord says that flax-seed poultices produce, in many cases, an eczematous eruption which may extend very much.

If the bubo passes into the chronic or indolent state, resolvent applications must be used, beginning with the least active — motion must be avoided as much as possible ; but when the patient is obliged to walk about, a mercurial plaster must be worn through the day, and at night, half a drachm of mercurial ointment rubbed in, and the part afterwards covered with a poultice, if there be any pain ; — if not painful, pressure must be applied by means of a bandage with graduated compresses, or with a truss. If the frictions produce salivation, exchange the mercurial ointment for that of iodine or of hydriodate of potash, using the precaution to cleanse the surface perfectly before applying the latter ointment after the mercurial.

When all these means fail, the method before alluded to as sometimes used in the early stage, that of a blister followed by a concentrated solution of bi-chloride of mercury, may be tried — extirpation of the gland is sometimes resorted to, when all other measures have disappointed us — but Mr. Ricord prefers the destruction of them by escharotics in such cases.

Whenever the induration of a bubo has a chancrous origin, mercury must be resorted to.

M. Ricord advises to discharge the matter from a bubo as soon as its presence is certain, whatever may have been the previous treatment — the opening always to be made in the direction of the longest diameter. A simple puncture is sufficient when the abscess is of limited extent, and the integuments are healthy ; when the contrary is the case, the whole extent of the undermined skin must be laid open. If the edges are very thin and of a bluish colour at the time of the incision, they must be removed by a bistoury, or what is better by curved scissors ; or what is still preferable, by an escharotic, which not only removes the useless parts, but stimulates the surrounding tissues to healthy action. A painful degree of pressure must not be used to evacuate the pus after opening the abscess ; baths, with emollient or narcotic poultices, must then be resorted to.

In cases of chancrous buboes, when their edges ulcerate, and the matter tends to burrow, or when they remain stationary, M. Ricord fills the cavity with powder of cantharides, and applies a blister over the whole. On the following day, if there be induration, he dresses the blistered surface with mercurial ointment, and the cavity with aromatic wine. If not, he applies simple cerate over the external surface, with lotions of acetate of lead, using the aromatic wine for the cavity, as in the other case, treating the true chancrous bubo as he would a chancre itself.

In all cases in which granulation takes place slowly and tediously, the powdered cantharides in the cavity, covered with dry lint, gives rise to exuberant granulations, which may afterwards require the nitrate of silver.

General measures must not be overlooked in the treatment of buboes. When acute, antiphlogistic regimen must be observed. In those of a lymphatic temperament, and those of a scrofulous diathesis, bitters and tonics are indicated, with nutritious, unstimulating diet — and in such cases, the proto-ioduret of iron, in doses of 10, 12, 15, 20 grains a day, in decoction of hops, or of saponaria, has succeeded in the hands of M. Ricord.

In his chapter on the *prophylactic* treatment of syphilis, our author, after repeating his observation that the rapid cure of the primary sore is the surest safeguard, remarks, that the practitioner who leaves an indurated chancre without general treatment, becomes, to a certain extent, responsible for accidents which may follow it; and that, of all the means to be used, mercury is the most prompt in its action, and the most efficacious. He says, this course must be pursued thoroughly, or not at all — attention to general health, both by observance of the rules of hygiene, and by the removal of, the different symptoms, unconnected with syphilis, which may occur, is very important in the general plan for protection from secondary symptoms.

One author commences his chapter on the curative treatment of secondary and tertiary symptoms with the remark that, if observations of the spontaneous cure of symptoms consecutive to syphilis are on record, they are exceedingly rare, and that constitutional syphilis is, perhaps, of all diseases, one of those which most imperiously demand the assistance of art.

He says the treatment of these symptoms must commence with their first appearance, and that no age or condition, no climate or season, afford any absolute contra-indication.

After some remarks on the importance of attention to the complications

which may exist, and an examination of the different modes of treatment proposed and practised, he gives the preference to the mercurial, when not contra-indicated. He says that mercury is not a specific, but that it is the most certain, and the most effectual remedy within the present range of our knowledge. — He employs it according to no exclusive system, but in accordance with rules deduced from observation. We must pass over his remarks on this remedy, and also his modes of employing it; but must be permitted to present the following general views of our author on the subject. He says, that he does not conclude that the mercurial treatment has failed in its effects because its use has been continued a long time, or has been repeated, without effect; nor does he regard it as injurious because, when given in improper doses, or at improper times, it may have given rise to momentary evils; nor does he ask from it more than it can effect, namely, the cure of the existing symptoms, without perfect immunity, in every case, from their return.

Opium he considers a valuable adjuvant, and one which, in its different forms, either alone or in connection with other therapeutic means, ought never to be neglected in either the general or local treatment.

In the treatment of *secondary* symptoms, he recurs to mercurials, with the proper preparation and auxiliaries; into the particulars of the use of which, he enters (though not with any minuteness) in the different forms of syphilitic eruptions, ulcers, iritis, affections of the testicle, and fall of the hair and nails. He has found mucous tubercles yield to one mode of treatment so rapidly and so certainly that he considers it truly specific. He washes them, when not ulcerated, with the undiluted chloride of soda — this he dilutes, if necessary, so as to produce only slight smarting without pain — and afterwards, sprinkles them twice a day with calomel. Cases of long standing are thus cured in eight or ten days.

The next chapter is devoted to the consideration and treatment of *tertiary* symptoms, in which he passes in review, deep-seated tubercles of the skin and mucous membranes (or syphilitic lupus), pains in the bones, periostitis, inflammation of the bone itself, and gummy tumours — into the treatment of all which he enters at considerable length.

The next of the remaining chapters of his work are devoted to the subject of blenorrhagia, which, after some general considerations, he studies in its modifications in each sex, and in the varieties common to both sexes — to this, succeeds a short chapter on vegetations, and another on phymosis and paraphymosis, which closes his undertaking.

The length to which we have been unconsciously led in what was intended for a mere *notice* of M. Ricord's work, will prove the interest

we feel in it, and the difficulty we have experienced in limiting ourselves in the transfer to our pages of the valuable information which it contains. In recommending the work as a practical guide in the treatment of a disease which, under its Protean forms, so often embarrasses the practitioner, and especially one whose experience in it has not been more extensive than falls to the lot of the majority, we will only add that, while our author has proved faithful to his motto, and has discussed the different modes of treatment in a way which shows that truth is his only object, he has given instruction to suit the varied and ever varying states of both constitutional and local syphilis, in a manner which proves that experience has been his teacher.

H. D. B.

The Principles of Diagnosis. By MARSHALL HALL, M.D. *Second American Edition; with Notes by JOHN A. SWETT, M.D.* 8vo. pp. 458. D. Appleton & Co. New-York, 1839.

A WORK, its author modestly affirms, "entirely destined for the young and inexperienced," but well calculated to render valuable aid to many of the profession, who have grown somewhat in experience as well as years. Dr. Hall's vast attainments in medical science have long been familiar to medical readers, and while the present work adds to his reputation for learning, it demonstrates his possession of a faculty not always found associated with learning, — the faculty of imparting knowledge in a perfectly clear and available manner.

This work is divided, primarily, into two portions; one exhibiting the sources of diagnosis, and comprehending the various sources whence the physician may draw his knowledge of diseases, their progress, and termination. These Dr. Hall has arranged under four general heads; the history; the symptoms; the effect of remedies; and the morbid anatomy. He has shown the value and necessity of all these to a perfect system of diagnosis; but upon the second, as its nature requires, he has bestowed most time and attention; the third treats exclusively of bloodletting, its effects being more certain, and, in a diagnostic point of view, more practically useful, than those of other remedial agents.

The other great division of the work relates to the "practice of diagnosis," and we think all who have read it, will coincide in our opinion, that the author has fully attained the object he has proposed to himself, (page 37,) "that its characteristic throughout, be brevity in statement, with fulness in the collection and arrangement of facts useful to the practitioner."

We might, did our limits allow, give an analysis of the contents of this division, and each chapter would furnish us a theme for commendation ; but as we are writing neither a review nor a panegyric, we will draw our notice to a close, by advising those of our readers who feel the need of assistance in diagnosis, (and who among us does not ?) to do more than read, to *study* Dr. Hall's "Principles." His omissions, (for he is not perfect in every point,) especially in the chapters on thoracic diseases, have been supplied by the American editor. And we are indebted to Dr. Bulkley, whose practical knowledge of cutaneous diseases is highly appreciated by us, for the valuable notes to the chapters devoted to that class of diseases. Thus completed, this volume is one of the most useful ever issued from the press ; and the physician, who has not yet formed acquaintance with its pages, may rest assured that he has neglected a mine of information, not less deep than productive.

W. B. C.

The Surgeon's Vade-Mecum, or Handbook of the Principles and Practice of Surgery. Illustrated with numerous Wood Engravings. By ROBERT DRUITT, M. R. C. S. London, 1839. 18mo. pp. 429.

THERE are times and occasions with every surgeon, when manuals or brief expositions of professional knowledge, are more willingly referred to than works of greater note. To the student, a well arranged epitome detailing the principles of pathology, the several forms of surgical disease, and the most approved modes of treating them, is of greater service than voluminous systems ; in the perusal of which, on first entering upon his studies, he is but too apt to confound the obsolete with the established, the frivolous with the important, the erroneous with the true. To the practitioner already acquainted with the literature of his profession, the handbook is often useful in refreshing the memory on special topics ; and to those whose taste or occupation rarely leads them to laborious research, it often furnishes important information, which, without such aid, would never have been obtained.

The little volume before us is coupled with no distinguished names ; it lays claim to nothing new ; its only recommendation is a modest one, — "a clear, concise, and orderly statement of facts ;" but it has reached us as a stranger, and as such we give it welcome. The profession, especially in this country, has long been in need of a manual like the present. The author has posted up with uncommon perspicuity, almost all the modern improvements in British surgery ; and we are acquainted with no other work of similar character in the English language, con-

taining, in so small a compass, the same amount of correct and useful information.

Were it fit to speak of omissions in a work which takes its character principally from its conciseness, we would refer to some few points, as for example, Sir Astley Cooper's new operation for varicocoele, which might have been supplied without materially increasing the size of the volume. Some of the chapters are not sufficiently full, even for a manual; and we would have wished, in a compilation of this sort, a more extensive range than the sphere of British literature. The author makes but one direct allusion to the surgery of America, and in this, as chance would have it, he is in error: he attributes to Dr. Mott the invention of the jointed aneurismal needle, commonly called the American needle, for which, in Dr. Mott's own words, we are indebted to Drs. Parish, Hartshorne, and Hewson, of Philadelphia.* To continental surgery he is not quite so indifferent; yet in estimating some departments of it, particularly lithotrity, he evinces more of national feeling than of close and careful comparison. He does not in all cases cite his authorities for important operations. This, in a manual, is perhaps a point of no great moment; and had the author invariably given the simple statement of facts, without quoting authorities at all, his work would have been quite as useful as at present, and much less liable to objection, in referring, as it does to some, to the neglect of others.

His diagnostic signs of disease are, in general, laid down with accuracy; and in most cases his medicinal and operative treatment are judicious. We would not, however, follow him in proscribing the use of nitrate of silver in the early treatment of venereal ulcers, not having witnessed the evil consequences which he attributes to the early application of this caustic. Again, the practice which he recommends after dividing the *tendo Achillis* for club-foot, is not such as is usually adopted; on the contrary, the plan advised by Delpech is the most approved.

With these strictures and suggestions, we would warmly recommend this unpretending little volume to the favour of the public. The student of surgery will find in it a clear and correct exposition of those facts and principles with which he should be most familiar; and the practitioner, who is prevented from entering more deeply into the science of his profession, will here meet with most of the improvements in the pathology and treatment of surgical diseases up to the present day.

J. W.

* See the Med. and Surg. Register, New-York, 1818, p. 21.

Prostitution in London, with a Comparative View of that of Paris and New York. By MICHAEL RYAN, M.D., Member of the Royal College of Physicians and Surgeons in London, &c. 12mo. pp. 447.

THE object of this work, as stated by the author, is "to prove moral depravation to be the most fertile source of crime and of personal and social misery." Books of this description have been very differently estimated by different critics. Some seem to think that they can serve no other purpose than to excite the passions, and gratify a morbid curiosity. Others, regarding them in a scientific point of view, have arrived at a very different conclusion. It seems to us that very much must depend upon the *manner* in which the undertaking is accomplished. It is a fact, paradoxical as it may seem, that many of the fountains of virtue spring from the regions of vice; that the evil and crime which exist in the world may be made to support, instead of undermining, the foundations of moral truth. It is by having the matter clearly placed before us, as a simple statement of facts from which fair conclusions may be derived, that we learn, without fear of contamination, the folly of vice, and gain new strength for the progress of virtue. Again, works of this description, when properly conducted, cannot fail, in the hands of the public authorities, to improve the condition of that most unfortunate class in society of whom they more particularly treat. It seems now to be generally admitted that prostitution is a necessary evil in large cities—while other species of vice vary very much in the degree of their prevalence at different periods, this preserves a steady position in the heart of society. Prostitution in London bears now, and has done for the last hundred years, an unvarying proportion to the population. If this be admitted, the duty of government must be to regulate and ameliorate the condition of this unfortunate class, instead of attempting to crush it. Such an attempt, while it will in no wise diminish its numbers, will only render it more degraded, and increase, instead of diminish, the evils it brings with it. It was with such views of the subject that one of the purest and most philanthropic men of the age devoted his time, and finally his life, in the cause of relieving human misery. We well remember M. Parent-Duchatelet, his pale benevolent countenance marked with the traces of incessant thought, as we frequently met him in the hospital of La Pitié. We remember, too, the full burst of grief from his friend and associate M. Louis, when he announced to us his death at the morning clinic. The work of M. Parent-Duchatelet on Prostitution

in Paris, is indeed a *chef d'œuvre*; one of the brightest examples of the application of the numerical method to the illustration of science. Eight years of incessant labour, which only terminated with his death, in the *bureaux* of the police, in prisons, in penitentiaries, in every place where the sources of information existed, has brought to light facts, and established conclusions, which cannot fail to enlighten governments and improve society. We consider the work of Dr. Ryan far inferior to that of Duchatelet as a scientific effort, but still we differ entirely from those who contend that its tendency is evil. Like every work of this kind, it is not fitted for all to read; but to the observer of life, to the man of science, to the philanthropist, it cannot fail to prove both interesting and useful.

J. A. S.

A Popular Treatise on Medical Philosophy, or an Exposition of Quackery and Imposture in Medicine. By CALEB TICKNOR, M.D., &c. New-York, 1838. 12mo. pp. 273.

An Exposition of Quackery and Imposture in Medicine; being a Popular Treatise on Medical Philosophy. By the Author of "The Philosophy of Living." *With Notes.* By W. WRIGHT, Surgeon-Anatomist, &c. London, 1839. 12mo. pp. 259.

WE are gratified to find that the "Exposition of Quackery," by our estimable friend and townsman, Dr. C. Ticknor, is duly appreciated on the other side of the Atlantic, and that within a few months of its first appearance here, it has been republished, with notes (we cannot say improvements,) by an English editor.

The object of the author in preparing this work for publication is a highly commendable one; and though not intended for the professional reader, yet every honest and enlightened practitioner will find in the work abundant materials for reflection. No one but a man fully imbued with the desire of being useful, and with a just perception of his professional responsibilities, would ever have undertaken the task which Dr. T. has so ably executed, in preparing this useful volume for the public; which, if once brought fully before the eyes of thinking men, would serve as a beacon light to guard them against the snares and pitfalls of empiricism. To the general reader the work must be as replete with useful information as it is with amusing anecdote; the author's style is simple and familiar, and his expositions of the structure, functions, and disorders of the human body, are brought down to the comprehension of every one. This was, of course, the more

necessary, in order to show to full effect, the absurdities and impositions of a class of ignorant, heartless, and designing rogues, who have too long preyed upon the vitals of their fellow-beings.

The only portion of the work with which we have reason to find fault, is the chapter "on the Errors, Exclusiveness, and Ultraism of Medical Men." There are, unquestionably, in our profession, as in all others, men who degrade and dishonour it; and some, who with honesty of purpose, are by partial, imperfect, and one-sided views, too easily misled; yet in our intercourse with our professional brethren, which has been by no means very limited, and we are proud of the acknowledgement, — we have found the number of such individuals exceedingly small, and the evil influence exerted by them scarcely worth remarking. We see, then, no good end fulfilled in magnifying evils that, from the nature of things, are irremediable, at least at present; or in burnishing these evils before the gaze of men who are already sufficiently skeptical of the benefits of medicine, and who, if persuaded of the truth of all the charges brought against us in this chapter, would be warranted in eschewing medicine, and those who practise it, for ever.

Dr. Ticknor's name does not appear on the title-page of the English edition, and his editor thus apologizes for the omission:—"The Philosophy of Living' has gained so much celebrity, that we have preferred using that title to designate the author of the present volume, and as a means of directing public attention to the individual to whom the merit of that highly useful production is really due." In this remark we presume the editor alludes to Mr. Mayo, who about a year after the first appearance of Dr. Ticknor's book here referred to, published a work in London on nearly the same subjects; and, whether knowingly or not, we are unable to determine, with precisely the same title. A British reviewer, in noticing these two works, remarks that it was fortunate for the American author that his book was published first; to which we might also add, it was equally fortunate that, on this occasion, the work of the English author was in the hands of a reviewer of his own nation.

J. W.

Outlines of the Institutes of Medicine, founded on the Philosophy of the Human Economy in Health and in Disease. By JOSEPH A. GALLUP, M.D. 2 vols. 8vo. pp. 876. Boston. Otis, Broaders & Co. 1839.

WE do not pretend to have read the above work, and in this respect we are probably on the same footing with most of our professional brethren, in whose way it may have fallen. A very few pages at the beginning, an occasional paragraph in the middle, and a hasty closing of the book at the end, with a willing determination never to meddle with it again, is all we have been able to accomplish. We should sincerely regret that such a work had been offered as a text-book to the young student, could we have the slightest fear that it would do him any material harm; it may occasion the waste of a few hours, but it can never impress upon his mind false principles. The leading character of the work is its *intelligibility*; it reminds us of those Anglo-German writers of the present day, whose chief faculty seems to consist in stringing together words, often of their own coining, to the total sacrifice of every thing like common sense. The simplicity of scientific language is forgotten, the directness of actual observation and experience finds no place; all is obscure, vague — high-sounding. Indeed we believe that the day is past when works of this description, even when far better executed, are wanted by the student or the practitioner. The science of medicine has already left the closet of the student and the lecture-room of the professor, and taken up its abode in hospitals and dissecting rooms; it has done with speculations and theories, to fix itself upon the phenomena of actual disease observed at the bedside, and corrected or confirmed by post-mortem examination.

J. A. S.

Boylston Prize Dissertations on Inflammations of the Periosteum, Eneuresis Irritata, Cutaneous Diseases, Cancer of the Breast; also, Remarks on Malaria. By USHER PARSONS, M.D., &c. Boston, 1839. 8vo. pp. 248.

THE five essays composing this work, as the title page announces, were prepared by Dr. Parsons, in reply to questions propounded at different times by the Boylston Prize Committee of Harvard University. Four out of these five have been honoured with the Boylston Prize, they therefore come before the public with judgement and approval already passed upon them. Dr. P. has indeed for several years been favourably

known as an author ; most of the articles comprised in the present work, having already been published separately. The merit of these articles consists not in any great amount of originality, or practical research ; but what is almost as creditable, in presenting to the profession lucid and useful expositions on several points in pathology and practice, so far at least as these points had been previously determined by the best authorities.

The work being considered in the light of a second edition, and as several of the articles must already be sufficiently familiar to our readers, our strictures on the present occasion will be limited to the "Dissertation on Inflammation of the Periosteum, both chronic and acute." In this the author commences with the structure and anatomical relations of the periosteum ; and then proceeds to the functions of this membrane, and especially to the share assigned it in nourishing the bones, and in repairing or replacing them after injury or disease. On this last subject the author, in the present edition of his dissertation, might have consulted with advantage Dr. Macartney's recent Treatise on Inflammation, particularly that part of it which treats of the formation of callus. He next takes up the diseases of the periosteum, confining himself for the most part to periostitis simple and syphilitic.

In treating of periosteal inflammation our author is, in general, correct and judicious ; yet in some few points he evinces a greater reliance on systematic and speculative writers than on practical authorities. For example, in accordance with the views of Bichat, he states that inflammation of the periosteum "rarely, if ever, ends in suppuration." Now had he consulted the writings of his contemporary and fellow countryman, the late Dr. Nathan Smith of Yale College, (no mean authority on this subject,) he would have learnt that in necrosis, a disease which usually commences with inflammation of the periosteum, "the local affection generally terminates in suppuration, frequently as soon as the fourth or fifth day." Those who are familiar with the management of periosteal swellings, know full well that even syphilitic periostitis, (which is much less disposed to suppuration than that from local causes,) may first present the *gummy* deposition, and afterwards proceed to suppuration ; and that when the matter thus forming, is not prevented, by a free and early outlet from burrowing under the periosteum, it separates this membrane from the bone beneath it, and thus by depriving the bone of its supply of blood, gives rise to necrosis, either of the whole thickness of the bone or of its superficial lamina.

After treating of syphilitic diseases of the periosteum, Dr. P. might properly enough have alluded to the carcinomatous degenerations of this

tissue ; the nature of the question, however, as proposed by the Boylston Prize Committee, did not necessarily require this.

J. W.

The Elements of the Practice of Medicine, designed as a Text Book for Students. By WM. REID, M.D. Lecturer on the Principles and Practice of Medicine. Edinburgh, 1839.

THIS is an excellent work ; common sense and a just appreciation of what is actually known in medicine, appear in every page. The style is simple, clear, and unpretending, the matter well arranged and practical. We confess that we were disappointed in the expected result of an examination of its pages, for past experience has too often taught us that professed works on the practice of medicine are among the most trashy of medical productions — one good work of the kind carefully read is all that the student requires as a chart, when commencing his difficult survey of the great domain of medical science.

J. A. S.

Valedictory Address to the Students in Medicine of the College of Physicians and Surgeons of the University of the State of New-York, delivered Feb. 28, 1839. By JOHN B. BECK, M.D. Professor of Materia Medica and Medical Jurisprudence.

THE above address, published at the request of the medical class, confirms the opinion, we believe, universally entertained by the profession, that the author justly ranks in the first class of our medical writers. The spirit of a well disciplined mind pervades every part of the address. One point in particular is very justly set forth, the importance of a thorough education preliminary to the study of medicine. The medical writings of the present century, however much they may surpass those of the preceding in the evidences of an improved mode of studying disease, are yet far inferior to those that preceded them in classical elegance, the accomplishment of a liberal education.

The following are some of Dr. Beck's remarks on this subject.

“ The first idea that I would present to you, is the importance of a well disciplined mind. When I speak of a well disciplined mind, I do not mean mere natural ability ; but I allude to that intellectual cultivation, which is the result of study and training upon a mind capable of improvement ; in other words, it is the cultivation of mind, which flows from a thorough education in the various preliminary branches of human

study. Of the necessity and importance of such mental discipline, there can be little question. The mind of man is naturally feeble and imperfect. Susceptible of boundless improvement, if left to itself it makes little or no advance in knowledge. Uneducated, untutored man, is little superior to the beast of the forest. Daily sustenance is the object of his toil, and the gratification of passion, the summit of his enjoyment. In the rudest states of existence, education is unknown, and there, we find the human mind in its lowest state of degradation. If we leave these, and ascend through all the intermediate grades of society, we shall find, that just in proportion as the means of education are afforded, is the human mind elevated, expanded, and refined; and just in proportion as these are withheld, is it grovelling and debased. Without any extended process of reasoning, it is evident that the mind requires to be educated. Like the body, it must pass through a long course of discipline, before its faculties are matured, and before it can become a fit agent for the accomplishment of the great ends for which it was destined. If this be so as a general fact, how much more strikingly does its truth appear, when we come to view it in its applications to the various pursuits of life, and especially those of a professional character. The undisciplined mind, however vigorous its native powers may be, is inadequate to the successful cultivation of knowledge as embodied in these pursuits. The whole history of human experience goes to show that no original genius, however great, can ever supply the deficiency occasioned by a want of discipline and study. In no profession, perhaps, is all this more strikingly illustrated than in that of medicine. Here, the object is pre-eminently the investigation of truth, not by flights of fancy, not by visionary theories, but by patient observation, by the laborious comparison of facts, and by the nice balancing of evidence. Now it is self-evident, that no progress can be made in such a process as this, unless by a mind properly cultivated. Such being the case, the question naturally arises, how is this intellectual cultivation to be attained? I answer, only by a sound education on general subjects as preliminary to an entrance upon professional studies."

We wish our limits would permit us to make more numerous extracts. We cannot help, however, adding the following eloquent inculcation of a great principle.

"But, gentlemen, the student of our profession will find all his intellectual discipline, all his varied learning, all his labour, of no avail, unless he give them a proper direction. Unless he direct them solely and devotedly to the investigation and establishment of *truth*, they will serve but to dazzle and bewilder, and leave no lasting monument behind them.

In the early period of his existence, comparatively unacquainted as he is with the world and with man, he may think it strange, and perhaps he may doubt, that any rational and intelligent being should be governed, in the exercise of his heaven-born faculties, by any other motive than the love of truth. A few years of melancholy experience, however, will convince him that other influences exercise a predominant control over the human mind, and that a thousand agencies are continually tempting it from the path of truth. In this way it is, that the whole of man's moral and intellectual nature has become corrupted. The whole history of the human race, from our great progenitor down to the present day, furnishes a painful but faithful illustration of the correctness of this assertion. In our profession, the student will find a thousand causes operating to divert his mind from the love and pursuit of truth, and it is against these that he ought to be fortified. At one time, he may find the authority of some great name raising its oracular voice to crush inquiry; at another, he may find the intolerance of sect or party attempting to stifle honest and manly thought; at another, he may find the love of distinction tempting to the promulgation of some brilliant theory, which, however false and dangerous, may yet gain for its author the distinction of a temporary notoriety. It is thus that truth has been obscured, and error rendered perennial in our profession. Now, against all these causes, the youthful votary of medicine should be especially on his guard. With a modesty, which is the grace of every age, but the especial ornament of youth, he ought to treat with all becoming respect the labours and researches of those who have gone before him, as well as those of his cotemporaries. But, while he reads and investigates them, he should not blindly receive all they say. His reason and his growing experience should continually sit in judgement. In short, he should always *think for himself*, and let *truth*, — simple, unsophisticated truth, apart from authority, and sect, and every thing else, — be his polar star."

J. A. S.

Lectures on the Theory and Practice of Medicine, delivered in University College, London. By JOHN ELIOTSON, M.D. F. R. S. &c., London, 1839. 8vo. pp. 744.

ALL will remember the great interest excited by the publication of Dr. Eliotson's Lectures, a few years since, in one of the London Medical Journals. These lectures are now collected into a volume, and offered to the profession, with the expressed expectation that the professor will never resume the office of public lecturer.

The adoption of Animal Magnetism by Dr. Eliotson, his public exhibitions of it in the wards of his hospital and elsewhere, his complete defeat by Mr. Wakely, and his final resignation of his place as professor, now form the most interesting medical topics in the London circle. As to his merits as a public lecturer, perhaps the best test of his claims to excellence, was his popularity; but for ourselves, (we visited him but once,) we must confess, that we were much changed in our preconceived ideas of his merits when we came to see and hear him. His visit to his patients was very cursory; his instructions at the bed-side were almost nothing; his clinical lecture common-place, and delivered without animation or eloquence. The principal feature we noticed in the conduct of Dr. Eliotson was a desire to please the students about him by personal attentions. His written lectures, are, however, full of facts; are enriched by excellent descriptions of disease; abounding in pathological knowledge, and correct principles of treatment.

J. A. S.

A Treatise on the Diseases produced by Masturbation, Self-Pollution, and other Excesses. By L. DESLANDES, M.D., Member of the Royal Academy of Medicine, Paris, &c. Translated from the French, with many additions. Boston: Otis, Broaders & Co. 1838. 12mo. pp. 252.

THIS work abounds in important facts, but they are not well arranged.

J. A. S.

An Introductory Lecture to the Course of Instruction in the Medical Institution of Yale College, Conn. By JONATHAN KNIGHT, M.D., Professor of the Principles and Practice of Surgery. 1838.

DR. KNIGHT is well known as one of our most distinguished medical lecturers. The lecture before us is occupied principally with a commemoration of the lives and services of the former medical professors in the institution with which he is connected. The following sketch of one formerly well known and highly respected in New-England, will, we think, give the reader a favourable impression of Dr. Knight's talent as a writer. "Dr. Nathan Smith was no ordinary man. Until past the period when most men are fixed in their occupation for life, he was, as he himself expressed it, a labourer with his own hands, in a comparatively obscure village, with a limited education, and still more limited means of extending it. After determining to become a physician, he

devoted all his exertions, and all the property he could acquire, to the attainment of a medical education, such as was then almost unknown in New-England.

The same enterprise and zeal that was manifested in obtaining his profession, followed him in the practice of it; and he laboured most assiduously during his whole life, not only to perform acceptably and beneficially the duties of a physician, but to diffuse among medical men, by his private intercourse with them, and by his public instructions, correct notions of their profession. In this he was eminently successful. It is not too great praise to say, that he accomplished as much for the improvement of physic and surgery in New-England as any other man. The faculties of his mind, by which he reached so high an eminence, were a discriminating inquisitiveness, watching with a keen eye every subject presented to him; a memory highly retentive, by which every thing of importance that he observed was made part of his mind: the power of reducing all his acquisitions, whether from reading or observation, to some useful practical purposes, and an undaunted moral courage prompting him to do all that he believed the good of others required, regardless of its effects upon himself. He was also assiduous, kind, and delicate in his attention to his patients, alike to all whether rich or poor, charitable to the destitute, bestowing upon them both his services and his property; cheerful and entertaining in his conversation with all, and of an unimpeachable moral character. With such qualities, both of the intellect and of the heart, it is not to be wondered at, that he should be regarded with respect and admiration, and that his death, at the age of sixty-seven years, when in the full maturity of his usefulness, should be felt to be a public calamity."

J. A. S.

The Annual Address to the Candidates for Degrees and Licenses in the Medical Institution of Yale College, Feb. 1839. By THOMAS MINER, M.D.

THE characteristic of this address is plain common sense.

J. A. S.

SCIENTIFIC INTELLIGENCE.

Proceedings of the New-York Medical and Surgical Society. Anniversary Meeting, May 11, 1839. Present, 18 members. The minutes of the previous meeting having been read and approved of, the Society entered upon its ordinary business.

Dr. Beales related several cases illustrative of the effects of strychnine in paralytic cases. A lady in a state of pregnancy, who had suffered various attacks of spasmodic pain, was suddenly seized with paralysis of the right side of her face. She was bled, leeches, and purged, and then put upon the use of yr. strychnine, in doses of gtt. xx ter in die, gradually increased to gtt. xxx ter in die. After taking the medicine a few days, manifest amendment was noticed, and the same treatment was directed to be continued.

A gentleman became paralytic on the left side; after taking the medicine, as in the former case, for seventeen days, spasmodic twitchings came on, and he is now recovering the use of the palsied side.

Dr. Edward Dixon read the following account of a recent *post-mortem* examination. The case was that of a child who was born alive, but died as soon as the head appeared, owing to unavoidable delay occasioned by the passage of a large tumour seated in the perinaeum.

A very accurate notion of the appearance of the child may be formed by supposing the whole perinaeum and skin over the sacrum to have assumed a bulging appearance, similar to the abdomen when much distended, and about the size of the same in a child of the full period unusually large. The child was a female; the vulva and anus were protruded far in advance of the natural position by the contents of the tumour, and appeared on its anterior face, being evidently connected

with their appropriate passages, as ascertained by examination with the finger.

The examination was made in the presence of Drs. Ellis, Nichols, and Throckmorton; Dr. Griscom had previously seen the case.

The first incision exposed the fibres of the levator ani muscle, and other muscles of the perineum; the next, the peritoneum. The first and larger division was now exposed; it contained several transparent sacs of various dimensions, from the size of a filbert to that of a pigeon's egg. Some of them were double, and contained a viscous and semi-transparent fluid. We considered them as hydatids — the rest of the anterior division of the tumour contained a bloody serum. The tumour itself was formed of various divisions of the peritoneum. Its other contents were sarcomatous and ossified deposits in an incipient state, a perfectly formed glandular body like an adult thyroid gland of medium size, isolated from every other part, and enclosed within a capsule of the peritoneum; next we found a group of irregular spiculæ of bone, contained within a similar fold of the peritoneum. The rest of the tumour contained gelatinous matter.

Dr. D. also related a case of *nocturnal emissions*, cured by the local application of *Argent. Nit.* to the lower portion of the urethra, after the manner of Lallemand.

Dr. Casey stated that he had recently seen a case in which the heart was seated on the right side, pulsating between the 2d and 3d ribs; the other viscera seemed to be in their natural position.

Dr. McVickar lately saw a case of *varicose veins*, of unusual size, in a pregnant woman.

Dr. Cumming mentioned a case of *Erysipelas Phlegmonodes*, in a child 11 months old, following vaccination — the application of strong mercurial ointment arrested its progress.

Dr. Vandervoort read the history of the following case of "*Cancer of the Uterus.*"

Mrs. T. born in Ireland, aged 29 years, married, is the mother of 3 children now living — has had 2 miscarriages, the last one being previous to the birth of her youngest child, who is now 2 years old. She arrived in this country about 7 years since, and always has enjoyed excellent health: subsequent to her arrival, her menses have been more than usually abundant, and she has occasionally had the *whites*, but not very copiously. Previous to the time from which she dates the commencement of her present malady her health was very good; she was quite fleshy and led an active life. About 7 or 8 months since, dating from Dec. 7th, 1838, when I first saw her, she had a pretty copious leu-

corrhexa, which seemed to alternate with a bloody discharge about her catamenial periods: at this time her back and loins were very painful and weak. About two months since she lost considerable blood *per vaginam*, and has had constantly since, more or less of a bloody discharge, and sometimes a watery and mucous discharge, with much fetor. She has also felt lancinating pains shooting across the lower part of the abdomen, passing through the pelvis, and then taking the direction of the sartorius muscle. Emaciation has been progressing for several months — her appetite is impaired — she has no nausea.

Her countenance now presents a well marked sallow aspect; she has no fever, nor any special constitutional symptoms. On pressing with the fingers upon the hypogastric region, the uterus was felt considerably enlarged and fixed; the pressure caused some pain. On examining *per vaginam*, the fundus of the uterus was felt greatly augmented in volume, about the size of an ordinary orange — its neck was obliterated — the lower lip was rather indurated; vegetations were felt about the mouth of the uterus and superior part of the vagina. When the speculum was introduced these vegetations were distinctly visible, and presented a ragged, ulcerated aspect: a bloody, or chocolate coloured fluid, of a very offensive odour, entered the speculum whilst in the vagina, although much care was exercised not to dilate this part, owing to the readiness with which hemorrhage was produced. It is unnecessary to enter into all the details of this case — it will be sufficient to state that she continued to pass more or less blood every day for several weeks, and subsequently, a profuse quantity of limpid fluid, that at times she complained of much difficulty and pain in voiding her urine; that violent pain in the back and pubic region constantly tormented her — that her stomach at times was very irritable, and refused to retain the little food which she took; that a troublesome diarrhoea attacked her a few weeks prior to the termination of her disease; and that the constant drain from her system enfeebled her so much, that she expired on the 8th of May, 5 months from the time when I was called to attend her, and about 13 months from the commencement of the malady. A *post-mortem* examination of the case was made by Dr. Swett, for a full account of which I must refer to his excellent paper on "Cancer of the Uterus."

Dr. Swett mentioned several cases in which the use of *halibut's* liver had produced considerable constitutional disturbance. The symptoms in some degree resembled those formerly mentioned by Dr. Post as having occurred in his own family.

Dr. Watson reported a case of tetanus, which had arisen from the plugging of a tooth.

Dr. Clark read the first part of his paper on the "Climate of Madeira," embracing a full account of the various changes to which it is liable, in reference to heat, moisture, variableness, &c. Also, as compared with the climate of other countries.

Dr. O. White was appointed to read a paper at the next meeting.

The *Treasurer* presented his Report, which was read and accepted.

The Society now proceeded to elect its Officers and Standing Committees for the ensuing year ; the result of the election is as follows :

Dr. H. D. Bulkley, *President* ; *Dr. John Watson*, *Vice-President* ; *Dr. J. L. Vandervoort*, *Secretary* ; *Dr. E. L. Beadle*, *Treasurer* ; *Dr. J. A. Swett*, *Curator*.

" *Post-mortem Committee*," *Drs. Swett, Watson, Post, Buck, Clark.*
Committee of Publication, *Drs. Swett and Watson.*

Dr. Ticknor nominated for membership *Dr. James Stewart*, seconded by *Drs. Dixon and McVickar*.

Dr. Post offered the following resolution : *Resolved*, That the 16th article of the Constitution be repealed. This being an amendment to the Constitution, lies on the table for two meetings.

Dr. Swett moved that the Society assemble on Monday evening, the 13th instant, at the Carlton House, to celebrate its Anniversary. Carried.

Adjourned.

In accordance with the resolution of *Dr. Swett*, and as had been previously agreed upon, the Society met at the appointed place, and celebrated its Anniversary around the festive board. In the course of the evening an *Address*, prepared by the Secretary, was delivered, which embraced an historical account of the rise and progress of the Society, an abstract of which we present to the readers of this Journal.

"During the year 1833, the Physicians attached to the New-York Dispensary, aware of the benefits to be derived from a free interchange of sentiments on medical subjects, formed an association among themselves, and resolved to meet at the Dispensary for the express purpose of reporting interesting cases, and discussing such topics connected with medical science as might arise. The deliberations on these occasions were of an interesting character, and some valuable papers were at various times laid before them. Monthly Reports of cases, with appropriate observations, were read, some of which were published in a Journal which was then in existence in this city. The tendency of these reports was such as to direct the attention of the members to the importance of keeping a record of such cases as came under their care.

This, though accompanied by much difficulty, arising from the irregularity of attendance on the part of the patients, and the great expenditure of time and labour necessary to the proper fulfilment of such duty, might still be pretty generally effected, and thus be the means of contributing something to the interest of the meetings.

As their presiding officer, they selected one of the Consulting Physicians of the Dispensary, to impart an air of dignity to their proceedings, and to profit by his sage advice and more mature experience. The respect due their estimable President, and the novelty of the project, together with the zeal and enthusiasm of the originators of this laudable scheme, caused them for a while to meet with regularity and punctuality.

But the strenuous efforts of the few, whose time and talents had been sedulously devoted to the support of this infant Society, were but indifferently seconded by the rest of their associates. And thus they were unable to carry out, as fully as they desired, their contemplated plan. After dragging out a feeble existence of rather more than twelve months, the meetings of the Society were necessarily discontinued.

Though disappointed in this their first attempt at forming a Society whose transactions might be of value to them, they were not disheartened; their generous emulation and pristine vigour still remained, though the edifice which they had commenced to rear had fallen into ruins. Experience had taught them that success in any similar undertaking, would more likely be obtained by increasing the number of co-operators, and thus diminishing the amount of labour required of each one. Accordingly, on the 14th of February, 1835, the "Members of the Medical Association of the N. Y. Dispensary," judging that a society somewhat similar to their own, if founded on a more extensive basis, might be worthy of the attention of their medical friends, Resolved, to so modify their constitution and by-laws, as to admit other physicians than those connected with the Dispensary. And after dissolving their then existing association, Dr. Watson was called to the Chair, and Dr. Swett appointed Secretary. At this meeting it was proposed that the physicians present should select from among their medical friends, a sufficient number of such as felt an interest in medical discussions and investigations, for the purpose of forming a Society of about twenty or thirty members.

A committee of three was appointed to draw up a constitution and by-laws to be presented at the next meeting.

Thus reorganized, an adjourned meeting of the physicians was held at the Dispensary, February 21st, at which eleven gentlemen were present.

At this meeting, the constitution and by-laws, which are substantially the same as those since adopted by this Society, were presented, having been drawn up by Drs. Swett, Griscom, and Milnor. At this meeting, also, the Society proceeded to ballot for its officers. Dr. Swett was chosen President; Dr. Wallace, Vice-President; Dr. Watson, Secretary; Dr. Bulkley, Treasurer. And on the 28th of February, it held its first regular meeting at the N. Y. Dispensary. The late Dr. Starr and Dr. S. Wood were the first reporters of cases, and Dr. Watson the first quarterly essayist.

This new enterprise promised to be far more successful than the former one, and for awhile the just anticipations of its friends were fully realized. Animated and interesting discussions, the relation of important cases, and analyses of recent journals, were regularly brought before the Society. The duties required of each member were performed with punctuality, and gave presage of the most favourable results. From time to time additional members were admitted, some of whom took a warm interest in the proceedings of the Society, whilst others regarded its transactions with the utmost indifference; they preferred to profit by the researches of others, rather than engage themselves in the laborious work. Additional efforts became necessary to secure, if possible, the attendance of those who, stimulated by an ardent desire to advance the cause of medical science, would be zealous in their discharge of the required duties, and in promoting all the objects for which the Society was organized. These efforts were made, but, for the most part, in vain. The dormant energies of the junior members of the profession were appealed to, to no purpose; they could not be roused from their listlessness and apathy, notwithstanding their interests are so deeply interwoven with all that appertains to an accurate investigation of disease, whether in regard to its symptomatology, diagnosis, or therapeutics. It did indeed seem strange that here, where merit receives its reward only after the most severe trials, and the most assiduous and persevering application, that a Society, whose features presented such fair prospects for the attainment of the most desirable ends, should have been so signally slighted.

The fairest opportunities for improvement are not seldom thus disregarded, unless, perchance, the attraction of golden charms is superadded to other less powerful inducements. Our Society rested its inducements and allurements solely on its capability to promote the objects for which it was created; and these objects were to be attained only by the zealous and unceasing co-operation of its members. Month after month the Society continued to assemble, notwithstanding it did so un-

der the most discouraging circumstances. At length its estimable President left for Europe, and was followed not long after by another member, whom ill health prompted to seek the doubtful benefit of a foreign clime. This cause, together with the warm weather which occasioned the temporary absence from the city of several of the members, induced the Society to discontinue its meetings during the months of July, August, and a part of September. On re-assembling in this latter month, it was found that so few were present that it was deemed inexpedient to transact any of the ordinary business of the Society. One meeting, however, was held in September, at which ten members were present, followed by two in October, attended respectively by eight and ten members.

The minutes of these meetings contain the reports of some interesting cases, and give much cause of regret that the Society was unable to remain longer in existence. A different disposal having been made of the room in which it was wont to meet, and suitable accommodations, elsewhere, not being at immediate command, together with the causes before mentioned, had the effect of breaking up the Society which had survived during a period of eight months.

A long interval now elapsed, during which the same Spartan band frequently evinced an earnest desire to revive their former association. They fondly cherished its remembrance, and looked back upon it with feelings of much satisfaction for the pleasure which it had afforded them, and the information which they had derived at its meetings. Their's was not the enthusiasm which is cooled by one reverse of fortune, not the spirit which is crushed by one untoward event.

Hitherto all efforts to establish a Society on a lasting foundation had proved ineffectual, the difficulties to be overcome were far from being imaginary, and were such as could not easily be removed. It was deemed advisable, however, to make another attempt and to secure, if possible, the attendance of a sufficient number of gentlemen who were zealously devoted to the promotion of medical science.

A preliminary meeting for this express purpose was accordingly held at the New-York Hospital, October 15, 1836, one year after the demise of the former Society which was established with the same design. On this occasion, the following gentlemen were present: — Drs. Bulkley, Adams, Watson, Beales, Griscom, S. P. White, McVickar, Beadle, Shook, Mitchell, Eigenbrodt, Vandervoort.

Dr. Bulkley was called to the Chair, and briefly stated the objects of the meeting, and Dr. Vandervoort as Acting Secretary, read the last

minutes of the former Society, and also the constitution and by-laws of that Society.

On motion of Dr. Griscom, it was Resolved: That the gentlemen now present, organize themselves as a Society under the name of the "New-York Medical and Surgical Society," and adopt the constitution and by-laws of the late Society of the same name, subject to such modifications as may be deemed proper, upon a revision of each article.

On motion of Dr. Watson, the Society proceeded to the selection of officers, which resulted in the choice of the following gentlemen: —

Dr. J. G. Adams, *President*; Dr. H. D. Bulkley, *Vice President*; Dr. J. L. Vandervoort, *Secretary*; Dr. J. C. Beales, *Treasurer*.

The gentlemen present affixed their signatures to the minutes, in lieu of the constitution which had to undergo revision, as evidence of their membership, and the Society then adjourned to the following week.

At the subsequent meeting, various necessary alterations and amendments were made to the constitution and by-laws, and such other measures adopted as seemed requisite to establish the Society on a firm basis. From that time until the present, a period of two years and a half, the meetings of the Society have been held with the utmost regularity, and a lively interest manifested in its various proceedings.

This brief sketch of the "New-York Medical and Surgical Society," will suffice to show on what a slight foundation it was originally reared; step by step, it has gradually risen from a state of infantile weakness to a vigorous manhood, and future fame and proud distinction await its onward career.

At each meeting, verbal statements of cases are made and fairly commented on, and a member, appointed by the President, is required to read a paper on some medical subject, or a report of interesting cases. Most of these papers have been monographs, and were drawn up with much care. Once in three months an essay is read; the choice of the subject being left to the person who is selected by the Society, — the appointment is deemed honorary.

In order to secure faithful accounts of *post-mortem* examinations, the Society recently passed a resolution requiring all such statements to be made in writing, and none else are received. A *post mortem* committee, consisting of five members, is annually elected, whose duty it is to attend to all such examinations upon the request of any member, and to make a written report of the same to the Society. The importance of accuracy in all the details of *post-mortem* investigations cannot be too highly esti-

mated, and the course adopted by the Society seems well calculated to favour so desirable an object.

Regular Meeting, May 25. Present fourteen members. The minutes of the previous meeting were read and accepted.

Dr. Watson related the following *post-mortem* examination of a man who had for years suffered from disease of the urinary organs, and whose death was preceded by an acute attack of mania.

May 21st, 1839 : I examined the body of Mr. A. D., formerly a merchant of this city, aged 60 years, and who had been dead about thirty hours — frame well developed, but not very stout ; considerable adipose matter under the integuments.

On opening the head, which was supposed to have been the principal seat of disease, the only appreciable lesions were, first, a congested state of the arachnoid, in which there existed some serous effusion, amounting perhaps to an ounce and a half : secondly, a firm adhesion between the opposite surfaces of this membrane for about an inch square, at the vertical portion of the brain on the right side of the longitudinal sinus : thirdly, a dotted appearance of the medullary portion of the brain when cut, caused by a congested state of the vessels running through this structure.

At the request of the physician, who had had charge of the patient, the examination was arrested here. Not having had his attention directed to the viscera of the chest or abdomen, during the life of his patient, he had no expectation of finding any important lesions within these cavities, but at the instance of the friends of the deceased who were anxious to have the body more thoroughly examined, I renewed the inspection some hours afterwards.

On opening the chest, the lungs were found perfectly healthy ; the pericardium did not contain more serum than was just sufficient to moisten the finger. The heart was empty, and of its natural size, but surrounded with a considerable quantity of fatty matter ; its parietes were rather softer than usual, and no morbid changes were observable on its inner surface. But immediately beyond the heart, commencing with, and including the valves of the aorta and extending through the whole length of the aorta and even to the sub-divisions of the iliac arteries, the inner lining of these vessels was of a crimson colour. This colour was deepest at the arch, where there existed a large rough and irregular deposit of bony matter, — another similar deposit, not quite ossified, was found in the abdominal portion of the aorta. The inner lining

of this vessel, besides presenting this crimson colour, appeared also to be softened, and in one or two spots it was abraded and easily elevated from the coats beneath it. The elastic coat was of its natural colour and appearance, except on the posterior portion of the vessels, where its colour was altered by the imbibition of blood.

On opening the abdomen, the liver was found rather smaller than usual, but of a healthy structure; the spleen, stomach, and intestinal canal, were also healthy. The left kidney had a mottled and ecchymosed appearance externally. The right kidney, besides presenting the same appearance, had its pelvic cavity much dilated, and lined with an irregular fatty deposit; the upper portion of the right ureter, going from the kidney, was dilated into a conical pouch about three inches in circumference above, and gradually tapering down to its natural dimensions towards the middle. The bladder was distended, containing about a quart of urine; its parietes were at least twice their natural thickness, and on the outer surface it appeared pouched. One of these pouches at the fundus was of a hemispherical form, and about an inch in diameter. Three calculi of a yellow colour were found within the bladder, two of them lying loose, the other was sacculated and firmly embraced within a pouch at the posterior part of the bladder. The two loose calculi were flattened ovoids in form, the largest about two inches long by an inch in width and a quarter of an inch in thickness; the other as large as a kidney-bean. The sacculated stone was also small, and lay so deeply in its proper cavity, as not to project into the cavity of the bladder. The inner surface of the bladder was in all parts reticulated as if by the unravelling of its muscular fibres; and this, with the distension of the cellular tissue beyond, gave rise to the small sacks and pouches already noticed.

A round tumour, pedunculated, and as large as an English cherry, was found projecting into the bladder from the upper and posterior portion of the prostate gland, and so situated as to fall against the commencement of the urethra, and thus prevent the flow of urine; its texture was, apparently, the same as that of the prostate gland itself.

This gentleman had for many years been troubled with difficulty of micturition, but since 1832 this had been much more distressed than formerly. Within the last few years he has been obliged to rise from bed several times every night, and was often straining for more than half an hour at a time in attempting to unload his bladder. Within this period, too, he had, occasionally, had lithic acid deposition from his urine, but he had never voided any gravel; and no physician, prior to his death, had ever

intimated the existence of stone in the bladder. He had suffered almost constantly since 1832, from a dull but severe pain in the back, leading his physicians to suppose that his urinary difficulty was caused by disease in the kidneys. He had long been subject to sudden starting in his sleep, and to violent palpitation of his heart.

A month or two before his death, his disposition appeared to be somewhat altered, and, as was supposed, in consequence of mercantile embarrassments; about eleven days before his death he became maniacal. During his last illness he frequently exclaimed that "his heart-strings would burst," and complained of much distress in the region of the heart; but these expressions were taken as metaphorical, and during his illness all his symptoms were referred to disease within the skull. He was not supposed to have any symptoms of true febrile excitement. The mania lasted until a few hours before death, when he became exhausted and sunk into a typhoid state, in which condition he expired.

Query. In this case what connection existed, as cause and effect, between the tumour at the neck of the bladder, the calculi, the diseased condition of the blood-vessels, and the maniacal symptoms, which in the last days of life appear to have masked all the others?

Dr. Dixon exhibited an adipose tumour which he had recently removed, and which, from various purple spots on its surface, he had supposed to be malignant.

Dr. Clark related a case of amenorrhœa, in which the patient was attacked with great œdema of the right arm when the menses ceased to flow; punctures were made into the swelling, and serum oozed out. In the course of six or seven months, the catamenia were restored for awhile, when the swelling disappeared; the menses again becoming suppressed, the œdema returned.

Dr. McVickar mentioned several cases of bronchitis in which the mucous membrane seemed to be in a very relaxed condition; there was oppression of the chest, cough and free expectoration. He referred to several cases in which he had used antimony, but was obliged to discontinue it, and prescribe generous diet and tonics, and with much benefit.

Dr. Griscom had seen similar cases; in one there was a sudden transfer of the disease to the stomach, followed by a copious discharge of bilious matter.

Dr. Post stated that he had recently seen a case of luxation of the humerus in a man 77 years of age.

Dr. Bulkley related the following effects of the external application of stramonium.

“I was called, May 10th, to visit a lady about 26 years of age, of dark complexion, and nervous temperament, who was nursing her first child, then 4 weeks old: the outer half of the left breast was very much indurated, very painful, and quite sore to the touch, and the integuments slightly red; the soreness and pain extended also into the axilla, where there was some swelling of one or two glands; there was also considerable constitutional irritation; 12 leeches had been applied to the part two days before, which had been followed by the use of stimulating (quack) ointments, instead of the emollient poultices ordered, and which had aggravated all the local symptoms very much; she was ordered to apply a poultice of bread and milk, with leaves of stramonium, and to take small doses of salts through the next day.

This poultice was applied in the evening, and afforded great relief, so that she rested very well through the night; very early the next morning (11th) she experienced, on awaking, considerable heat of skin, and a sensation of fulness and of stricture about the posterior fauces, and at daylight, found numerous spots of urticaria on her hands, and soon after, on her face, neck, and limbs. When seen at 9 A.M., the eruption was very thick on these parts, presenting the well marked characters of urticaria; the elevations on the face, and particularly on the neck and upper part of the chest, were of a decided *rose* tint; the face was somewhat swollen, the itching was quite severe, and returned in paroxysms. The eruption in the course of the day spread over the body and limbs; bowels free, tongue clean, appearance of throat natural; no indications of affection of brain; urine high coloured; ordered to discontinue the use of stramonium, and to take a slight laxative.

Next day, (12th) no stool; the irritation of the eruption diminished through the day previous, but there was great itching at intervals. The relief afforded by the stramonium the night before, induced her to apply it again last evening, in consequence of some return of the pain. In about 15 minutes from the time of its application, a sensation of fulness and oppression was again felt about the posterior fauces, and also the upper part of the chest, which was soon followed by a fresh eruption of urticaria, with great increase of the itching; eruption now very abundant over the whole face, neck, chest, and limbs, and also on body, (which was not examined) some of the patches are very large, especially about the wrists, confluent in some places, in wheals or other parts, some of quite a distinct *rose* colour, others white; paroxysms of itching quite severe.

Small doses of salts, with light diet, are ordered, and the eruption gradually declined, and was all gone on the fourth day ; she never had any eruption of the kind before.

Dr. O. White read a report of cases of disordered menstruation in which iodine was given with much benefit.

Adjourned.

Extracts from the Minutes of the Kappa Lambda Society. Regular Meeting, July 25, 1838. Dr. A. C. Post gave an account of a *post-mortem* examination of a lady, aged 50 years, who had suffered from hemiplegic attacks, and other symptoms of affection of the brain.

The *brain* was softer than natural, especially the corpus callosum and septum lucidum. A cavity containing purulent matter, with a lining of coagulable lymph, was found in the left corpus striatum ; the hemiplegia was on the right. The arteries of the brain were enlarged and thickened.

The *heart* was enlarged and hypertrophied ; the valves thickened and indurated. In the cavity of the left pleura, was found a pint of fluid, of a dark greenish or yellowish colour.

In the posterior part of the *stomach*, near the cardiac orifice, three perforations were found, which communicated with the diaphragm, and through it, the contents of the stomach had been discharged into the left pleura. A mass of fat was found between the pleura and pericardium.

Dr. Buel mentioned a case of paralysis of the muscles of the throat and pharynx following syphilis.

Dr. Rodgers mentioned a similar case of paralysis in a female, attended with great torpor of the bowels, very little *fæcal* matter was discharged during two or three years.

Dr. R. also spoke of a case of hydrocele, in which he had punctured and drawn off nearly three pounds of fluid.

Dr. Isaac Wood mentioned a case of ovarian dropsy, which he had recently tapped the sixth time, and drawn off eight gallons of fluid.

Regular Meeting, August 29, 1838. Dr. Atkins related a case of ovarian tumour of large size, much relieved by the treatment proposed by *Dr. Hamilton* of Edinburgh. It was a solid indurated tumour, causing the abdomen to present the appearance of a woman in the seventh month of pregnancy. She was put upon the use of a pint of *ext. con. mac. and pulv. ant. ãã gr. ii.* four times a day, with poultices of the

conium maculatum to the abdomen. In a few weeks the tumour was reduced to the size of a child's head a year old; in which state it remains, now nearly two years, causing very little inconvenience.

Dr. A. also stated the case of a lady who recovered after a pulmonary abscess under the following circumstances. The patient was of a consumptive family, of dull phlegmatic habit of body, tall, and thin. In the fall of 1837, she had an attack of pleuro-pneumonia, from which she was convalescent in about six weeks. She had *no cough*, till resolution took place. She remained well through the winter. In March, she presented the following appearance; pulse 120; great debility; dull sound under the left clavicle only; respiration extremely feeble in the same part; *no cough*.

Diagnosis: Tubercles; and, considering the family predisposition and general appearance, an unfavourable result was predicted. She was put, at once, upon the use of iodine externally and internally, as recommended by Dr. Morton, in his work on consumption; the free use of the best Madeira wine, and a diet of cream, milk, &c. In ten days after, an abscess broke in the night, she began to cough, raised large quantities of yellow pus, and numulated sputæ, lost her voice, and presented, altogether, the most unfavourable appearance. The remedies were pushed vigorously; and in two weeks, the expectoration and cough had nearly ceased. She continued the same remedies for six or eight weeks longer. The pulse became less frequent, the dull portion of the lung recovered its natural sound, and respiration was freely established in every part of the lung. Her strength was restored, and she remains perfectly well at the present time; fourteen months after the treatment was discontinued.

Dr. A. remarked that he was not aware of any form of pulmonary disease, that would accord with the above description, but a local deposition of tubercular matter, happily removed by suppuration. The patient's constitution was admirably suited to the use of iodine, she being of a dull, pasty, irritable habit, not having presented at any time an appreciable increase of heat of skin in any part of her illness.

Dr Hoffman reported a case of Cæsarian Section, terminating favourably to the mother.

Dr. H. was called at 8 P.M. August, 12, 1838, by Dr. Cockroft, jr. to visit with him a Mrs. Day, at No. 51 Allen street, then in labour with her first child. He found her a dwarf — 4 feet high — 42 years of age — her spine and body, seemed of ordinary length, but lying on her side in bed, she appeared to have no legs, the length of her lower extremities not being greater than that of an ordinary thigh, and her upper extremi-

ties equally disproportioned. On examination *per vaginam*, the anterior surface, or what should be the hollow, of the sacrum, was felt bulging forward with a regular, smooth, convex prominence, that had been mistaken for the head of the fœtus at the full time. To prove that the sacrum projected forward, the fore-finger was introduced up the rectum, and found to pass anteriorly to the projection — at the base or promontory, the sacrum approached so near the symphysis pubis, as to admit with difficulty the passage of two fingers between them, reducing that space to about an inch and a quarter. Laterally, there was more space, but not in the antero-posterior diameter. The head of the child could be reached by the finger through this narrow aperture, lying above the brim of the pelvis, and its outlines could be distinctly felt through the parietes of the abdomen, pressing on and projecting forward over the os pubis. A catheter was introduced, and the bladder found nearly empty. Drs. Belcher, Cockroft, and the reporter, concluded that there was no resource but the section of the womb. Dr. A. L. Anderson, so well known for his obstetric skill and experience, was called in, who thought that by care and very patient waiting, it would be practicable to deliver by embryotomy. Dr. Hoffman was unwilling to resort to this, from the conviction that, with a space not wider than an inch and a half at most, with the rectum behind and the bladder in front, together with the relaxed os tinæ in the way, and the head hardly within reach of the finger, it would be almost impracticable, and would endanger wounding the bladder or rectum, and lacerating the cervix uteri. He, however, went home to procure instruments, and requested his neighbour, Dr. John Watson, to accompany him to the patient, who, after an examination of the case, decided in favour of the Cæsarian section: Dr. Cockroft, (whose patient she was,) and Dr. Belcher, who had seen her in consultation, agreeing in this decision, and requesting Dr. Hoffman to perform the operation, the patient having then been in labour 24 hours. Dr. H. proceeded as follows: placing the patient on her back on a cot, with the thighs flexed on the pelvis, an incision from six to seven inches in length was made through the skin from near the os pubis to the umbilicus, in the course of the linea alba. Being much stretched by the distended uterus, the integuments receded to the extent of three or four inches as they were separated by the scalpel, and were easily divided by slight touches of the knife. On dividing the exposed peritoneum, some fluid gushed out, which it was thought might be urine from an over distended bladder, though the catheter had been introduced two hours before. To remove any apprehension of

this kind, that instrument (a long flexible one) was again introduced, and very little urine was found in the bladder, showing that the fluid came from the cavity of the peritoneum. The uterus thus laid bare, was divided by one stroke of the knife, about five inches in length, the head of the child, (the occiput presenting,) was at once protruded through the incision, and with a little assistance, was delivered, followed by the shoulders, &c. It evinced signs of life by gasping and moving the arms. Dr. Belcher took it in charge. With the umbilical cord as a guide, Dr. H. then introduced his left hand through the incision into the uterus (which was not felt to contract), and on gently pressing the placenta, it was found to be detached, and was removed. There was not more hæmorrhage than usually attends a natural delivery. The small intestines which had protruded to a considerable extent, were carefully replaced, and the wound brought together by 6 or 8 sutures, not including the peritoneum. Adhesive straps, compress, and bandage were then applied. The pulse was good, and did not flag during or after the operation — 20 drops of solution of sulphate of morphine were given, and repeated during the night.

13th. Second day, 7 A. M.; 9 hours after the operation. Patient had slept, and had passed a tolerably good night; felt comfortable; had not voided urine; pulse 120; some heat of skin, no distention of abdomen; an enema of infusion of flax-seed was prescribed.

5 P. M. — 19 hours after operation; had voided urine twice. The enema, which had been repeated, had not come away; abdomen more tense, and somewhat tympanitic, tender to the touch, and pain darting from one lumbar region to the other; pulse 104, and strong. She was freely bled, and 15 grains of calomel were ordered, to be followed at bed-time by castor oil; hop fomentations to be applied to the whole abdomen.

14th. Third day, Abdomen tumid and tender; no discharge from bowels had taken place; an enema containing ol. terebinth. was then given, and was followed by a free evacuation of the bowels; 18 leeches were then applied to the abdomen, and the fomentations continued.

15th. Fourth day, venesection repeated to 10 or 12 ounces, and fomentations persevered in.

17th. Sixth day, wound was dressed, leaving the sutures, union being incomplete; pulse 110; ordered castor oil.*

* We here annex the account of the progress and the result of the case, as subsequently furnished Dr. H., for the purpose of giving a continuous view of it.

By confining her to a very small quantity of light nourishment, by the occasional use of aperients or enemata, and by fomentations assiduously applied to the abdomen, the soreness and uneasiness were gradually removed, and on the 2d of September, three weeks after the operation, the patient was sitting up in a chair, "feeling *smart*," with a good appetite and her bowels regular. The wound had closed, with the exception of a very small space at its lower part — a probe introduced into this, could be felt at the os tincæ, showing that the incision into the uterus was not entirely closed. Four weeks after the operation, the patient (who was a very estimable and industrious little woman,) set out on her journey home on Long Island, at a distance of 30 miles, with the wound completely closed, and in good health. In October following, she was heard of as continuing in good health.

The child was deformed in the lower extremities, and did not long survive its delivery.

At the *Anniversary Meeting*, held Oct. 31, 1838, the annual election of officers was held, and the following were chosen :—

Dr. R. K. Hoffman, *President*.

" F. U. Johnston, *Vice President*.

" A. C. Post, *Corresponding Secretary*.

" H. D. Bulkley, *Recording Secretary*.

" Gurdon Buck, *Treasurer*.

" J. A. Washington, }
 " Wm. P. Buel, } *Guardians*.
 " Isaac Wood, }

Regular Meeting, Nov. 28, 1838. Dr. Post related an interesting *post-mortem* examination of a female, a widow, thirty-seven years of age, who had been suffering from chronic diarrhœa three or four months. An accurate history of her case could not be obtained; acute symptoms supervened, and terminated her life at the end of about a week.

There was great emaciation of every part of the body except the omentum, which was loaded with fat, and was low down, and adhered to the viscera, and to the walls of the abdomen. A quart of sero-purulent fluid, with flakes of lymph, was found in the hypogastric region; there was redness and congestion of the peritoneum of the right lumbar and inguinal regions, and a mass of lymph in the right inguinal region. The ileum was found separated from the cœcum directly at the valve, between

a quarter and half an inch, the circumference of each portion of intestine presenting a round, elevated margin, as though an attempt had been made at reparation. The vermiform appendage was also found detached and lying in the pelvis, adhering to a diseased ovarium. The right ovary was converted into a sac, containing a dark melanotic fluid; both ovaries were adherent to the rectum and to the bladder. The coats of the large intestines were thickened; their whole surface was smeared with a puriform fluid, and sprinkled with numerous ulcers along their whole course; there was no fœcal matter in the abdomen.

Dr. Post also related the case of a man, seventy years of age, who died from retention of urine. A physician was called who relieved him for several days by the catheter. In one instance, a slight laceration of the mucous membrane gave rise to the discharge of a very little blood. The physician was then dismissed, and a quack called in, who pronounced it a case of *piles*, and would not introduce the catheter; at the end of a few days, the patient died. On examination of the body, the prostate gland was found enlarged, laterally, to six or eight times its normal size, and there was an appearance of longitudinal bands of muscular fibres along the floor of the prostatic portion of the urethra.

Dr. Post exhibited a specimen of an urinary bladder taken from a child four years old, which he was called to examine, and which died of retention of urine. The child died without the cause of death being known, and the bladder was found by *Dr. P.* much distended with urine, and much congested, measuring six and a half inches in length, and four inches in breadth.

Dr. Post also mentioned the case of a seaman brought into the N. Y. Hospital, who had been injured by a fall into the hold of a vessel. In falling, he turned a somerset, and struck on the nates, and probably afterwards struck his head. When he reached the hospital, he was cold, and almost entirely insensible, and the pupils were contracted to the size of a pin's head. Warmth had been restored by the proper means before *Dr. P.* saw him. He found the head much bruised, and an effusion of blood in several spots; the patient lived but a few hours. After death, he found the brain and blood mixed together, as though the brain had been bruised to a pulp and mixed with the blood. *Dr. P.* wished, principally, to direct attention to the state of the pupil, and to inquire, what particular state of the brain is connected with a dilated and what with a contracted pupil. He is inclined to the opinion, that a contracted state of the pupil indicates laceration of the brain.

Dr. Jos. M. Smith related the case of a seaman in the New-York Hospital, with disease of the heart, accompanied by dropsy; the cellu-

lar tissue, particularly of the lower extremities, was enormously distended, but without any ascites. The scrotum was more distended by fluid than he had ever seen it in any other case. A large quantity of fluid escaped from it on being punctured, and it afterwards sloughed very extensively. The patient laboured under great difficulty of breathing, amounting to orthopnœa, with great anxiety of countenance, &c.; pulse was generally regular, and not much disturbed. There was increased impulse of the heart, and dullness over the precordial region, and also a peculiar sawing sound connected with the second sound of the heart, so modified as to be musical; it was like sawing at a distance, and was thought to indicate valvular disease, Dr. Smith thought, of the tricuspid; but it was difficult to decide which valve was the seat of disease. On examination of the body, the heart was found very much enlarged, the size of a bullock's; the walls of the right ventricle were thickened, and its cavity somewhat dilated. The cause of the peculiar sound was in the mitral valve, which was rather thicker than natural, and but imperfectly closed, leaving an opening rather larger than a goose-quill. There were no other lesions to account for death; the liver was slightly enlarged.

Dr. J. K. Rodgers related an operation for the removal of a large tumour, the particulars of which, with the drawings, may be found in another part of the present number.

Regular Meeting, January 30, 1839. — *Dr. Washington* reported a case of painful and rather profuse menstruation relieved by arsenic, given in the doses recommended by Hunt, but with the addition of conium and ipecacuanha. The patient was twenty-two years of age, of leucophlegmatic temperament; the pains were almost as severe as those of labour; there was also pain in the side during the intervals, want of appetite, and desire for improper food, as acids, pickles, &c. She commenced taking pills, consisting of two grains of conium, and one-twentieth of a grain of arsenic, three times daily, about a fortnight before the menstrual period, and passed the period without pain; there was also improvement of the general health. She took at the same time, two lozenges daily, containing each half a grain of ipecac; diet of milk and vegetables. She took forty pills before the first period, and sixty before the second, the whole number containing five grains of arsenic. *Dr. W.* added, that *Hunt* details a case of cancer of the uterus, in which *Fowler's* solution was given with advantage after opiates, &c. had failed to relieve the agonizing sufferings of the patient.

Regular Meeting, Feb. 27, 1839. Dr. J. K. Rodgers exhibited a tumour removed by him from a young man in October last, and reported at the meeting in November; and also two drawings, exhibiting a front and back view of the patient before the operation. (The case is reported, with the drawings, in the present number of this Journal, p. 23.)

Dr. R. also reported a case of dislocation of the head of the os femoris in an adult female. Dr. R. remarked, that Dr. Warren, Jr. of Boston had told him that he had never seen a case of this kind, nor had his father, nor any surgeon whom his father had consulted on the subject in Europe. Dr. R. has seen and reduced three cases of the kind. The day before yesterday, he saw a woman at the Eye Infirmary, who had received an injury of the hip joint from a fall. The limb was one inch shorter than the other, the toe turned inward, the thigh in advance of the sound one, and flexed on the trunk, and there was flattening of the nates. On rotating the thigh, the great trochanter described the arc of a large circle; the anterior superior spinous process of the ilium, the great trochanter, and the tuberosity of the pubis, did not constitute the angles of an equilateral triangle. A fifth case which he did not see, has recently come to his knowledge, in a female, 61 years of age, at the New-York Hospital, who had dislocation of the head of the os femoris or the dorsum of the ilium. Dr. Warren, Jr. says there is not a case of the kind on record.

Dr. Rodgers remarked that he had never seen a dislocation of the hip joint reduced which had existed over twenty-nine days. Sir A. Cooper mentions one case of five years standing, reduced accidentally by the patient's being thrown from his berth in a gale of wind.

Dr. A. C. Post read the following *post-mortem* examination of the case of Lupus, accompanied by jaundice, reported at the last meeting, and exhibited the specimen showing a calculus lodged in the ductus communis.

Post-mortem examination of Hugh Gilmore, seaman, 40 years of age, who had been under treatment for Lupus in the New-York Hospital, and had been nearly cured by the application of Dupuytren's powder, when he was attacked with vomiting and tenderness at the epigastrium, accompanied with jaundice, of which he died ten days after these symptoms had supervened.

Skin and sub-cutaneous cellular tissue intensely yellow; the same discolouration of the duodenum on both surfaces. Yellow serum under arachnoid membrane, covering the hemispheres; brain not discoloured; peritoneum, ilium, pericardium, and internal surface of heart and arte-

ries, of a yellow colour; liver very large, extending an inch below the margin of the lowest rib, and two inches below the sternum; extending also into the left hypochondrium and touching the spleen. On incising the left lobe of the liver, there flowed out several ounces of a yellow fluid, with flakes floating in it. The gall and bladder not much distended with bile; it contained about an ounce of a fluid resembling that which flowed from the left lobe of the liver. In the ductus communis choledochus, near the duodenum, there was a calculus which completely obstructed the duct; it was of a globular form, with a rough surface, and nearly half an inch in diameter. On cutting the left lobe of the liver, numerous bright yellow spots were found, apparently owing to depositions of a solid yellow matter in the substance of the liver. The pancreas was unusually firm. The mucous membrane of the stomach was injected in spots, and softened.

Dr. Post also read the following account of an interesting case and *post-mortem* examination of a patient with tubercles in the lungs, and in the brain, and exhibited a specimen of the latter, presenting a tubercular mass of the size of an almond, adhering to the membrane covering the upper surface of the cerebellum, and numerous miliary tubercles in the arachnoid at the base of the brain.

Mary Ann Cone, a coloured girl, about 8 years of age, had been for some time affected with cough and emaciation, with dulness on percussion under the clavicles, and feeble respiration in the same region. She had been for the most part confined to her bed, and often moved and fretted without any obvious cause. Her temper was very irritable and ungovernable, and her intellect seemed to be impaired. On Wednesday, Feb. 20, 1839, she was suddenly attacked with violent convulsions, affecting the whole body. I saw her within an hour or two after the attack. She was then insensible, and suffering from general convulsions, her pupils dilated, and not contracting when a lighted candle was brought near to them. Her breathing was attended with loud rattling, as from mucus in the trachea and bronchi. Sinapisms were applied to the legs, &c. No favourable change occurred, and the patient died in about thirty hours after the commencement of the convulsions. On examination of the body, a large quantity of serum was found beneath the arachnoid membrane, and in the ventricles of the brain. The veins of the pia mater were turgid with blood. Small tubercles were scattered over the surface of the brain beneath the arachnoid membrane. A tubercular mass, as large as an almond, was found on the upper surface of the cerebellum near the median fissure, and towards the posterior part. The velum interpositum was thickened, and tubercles seemed to be de-

posited in it. The upper lobes of both lungs, especially the left, contained a large quantity of tubercular matter, partly in a crude state, and partly in a state of incipient softening. A large tubercular mass of the size of a Madeira nut, and beginning to soften, was found in the bronchial glands, about the bifurcation of the trachæa. A few scattered tubercles were found in the substance of the liver.

Dr. Post also read the following account of the *post-mortem* examination of a case of purpura hæmorrhagica, in an infant three weeks old.

On the 25th Feb. 1839, I was invited by Dr. B. B. Coit to examine the body of an infant three weeks old. There had been hemorrhage during the first and second days of its life, from the sides of the umbilical cord, which had been checked by the application of powdered galls, and by pressure. It had then exhibited purple spots, apparently formed by the extravasation of blood, beneath the skin in different parts of the body; these spots were an inch or more in diameter. The evacuations from the bowels continued for eight or ten days of a black colour, and of a tar-like consistence. Small doses of calomel were then administered, and the evacuations began to assume a healthy appearance. The ecchymosed spots then began to fade away, and no new ones made their appearance. But about the 10th day, a fluctuating tumour began to form about the posterior part of the occipital ridge, which continued to increase during a period of ten days, when it had acquired about the size of a hen's egg, and was very tense, and seemed to cause much irritation. The tumour was opened with a lancet, and black fluid blood flowed from it. On the following day, the child died.

The following appearances were found on examination: body not emaciated; surface extremely pale; ecchymosed spots in several places beneath the skin, scarcely perceptible on its external surface, but very distinct on the internal surface; there was a fluid tumour at the posterior part of the occipital ridge, containing a soft coagulum of blood; this sac was found beneath the periosteum and the bone; small quantities of bloody fluid were found beneath the arachnoid membrane on the surface of the pia mater; bloody serum and small quantities of coagulated blood in the ventricles of the brain; cineritious substance of the brain of a pure white colour, so that I could not, in any situation in which I examined it by broad day-light, distinguish it from the medullary substance; lungs remarkably pale; cavities of heart empty; stomach and intestines very pale, and distended with gas; liver of about the usual size and consistence, but of a yellowish brown colour, without any shade of red.

Dr. Post also exhibited a specimen of ununited fracture of the neck of the thigh bone found in the dissecting room, and a specimen of

fracture of the thigh bone taken from a Swedish sailor, who died at the New-York Hospital of intercurrent pneumonia of both lungs, while partially convalescent from chronic dysentery, under which he had laboured for some months, and for which he was under treatment at the Hospital. The fracture was produced by a fall on deck, from the height of forty feet, after he had been for some months suffering from the dysentery. The bone was broken in three pieces; the length of the middle fragment was about five inches; bony union had taken place at one extremity, and an imperfect joint was formed at the other.

Dr. G. Buck related an interesting case of injury of the spine by a pistol-shot wound, of which we are promised a detailed report at a future time, the case being still in progress.

Dr. W. P. Buel reported a case of pneumonia in an infant 20 months old, which proved fatal in 48 hours after the first attack, notwithstanding the most active treatment was employed. On examination of the body 24 hours after death, both lungs were found affected, but the left the most so, as had been discovered before death; the inflammation was interlobular, and confined to the posterior part; the lung sank in water. There was considerable bronchial inflammation.

Dr. F. U. Johnston mentioned a case of irregular nervous action in one arm, of two year's standing, in a child 7 years old, cured by *actæa racemosa*. It was chiefly confined to the right arm, showing itself in a grasping motion; the same irregular action also occasionally affected the feet. A great variety of remedies had been tried without effect. The patient took 15 drops of the tincture, every 2 hours, for two weeks; the affection nearly ceased in ten days, and was entirely gone in a fortnight. The medicine produced no sensible effects but a headache. *Dr. J.* also alluded to a case of chorea of six year's standing, reported as cured by the same remedy two years since, of which there has been no return.

Dr. Rodgers related the case of a pulsatory tumour, about two inches in diameter, situated over the first spine of the sacrum, and also another tumour, of a similar character, on the right side of the ilium, which communicated with it. This had been seen by a physician a fortnight previous and opened, and a little blood was discharged. On passing in a probe, it was followed by two or three jets of blood *per saltum* — and there had been pulsation in it since that time. Some months previous, severe pain came on suddenly in the back and left hip joint, after pulling on the boots, extending also to the right side, and attended with great feebleness of the limbs — for this, an issue had been applied. *Dr. R.* thought it an aneurism, and that

there was very little to be done. On examination of the patient, he found great distention of the bladder, and drew off three pints of urine with the catheter. On examining the rectum, he found a soft tumour, which did not pulsate, but had the middle sacral artery passing over it. The patient afterwards died, and he expected to find an aneurism extending through to the posterior part of the bone, and an immense sore — but he found no aneurism. There was a tumour over the three upper bones of the sacrum, extending to the sacro-iliac junction. It was of a soft, brain-like consistence, in contact with the lower part of the aorta and internal iliacs, and in this way had pulsation communicated to it.

Regular Meeting, March 27th, 1839. — *Dr. J. K. Rodgers*, related the *post-mortem* examination of a medical gentleman, 43 years of age, made this day. He had laboured under dyspepsia, and had supposed that his liver was so much enlarged that he could feel it. His left arm had been twice momentarily paralyzed within the last six months, during the performance of operations. Palpitations and distress in the region of the heart had existed at different periods for some time previous. Yesterday, after considerable mental anxiety and disturbance, he found himself paralyzed in bed, mentioned the fact to his wife, and requested medical attendance. He became insensible, the left side became entirely paralyzed, and death occurred in eleven hours. On examination of the body after death, a recent coagulum of blood was found in the substance of the brain on the outer side of the right corpus striatum, nearly of the size of a turkey's egg, extending also into the ventricle. There was hypertrophy of the left ventricle of the heart, without valvular or other disease — no ossification of the vessels of the brain existed. The liver was healthy, and was not enlarged, as had been supposed. The mucous membrane of the stomach was not soft, and was apparently sound. The lungs were perfectly healthy — there was slight adherence of the left pleura.

Dr. Rodgers mentioned that the female, 61 years of age, referred to at the last meeting as a case of dislocation of the head of the os femoris, on the dorsum of the ilium, had died, and that the *post-mortem* examination had verified the diagnosis. The round ligament was torn off, the capsule torn through, and the gluteus medius and minimus, torn up by the head of the bone, which rested on the dorsum of the ilium.

Dr. Washington related a case of arm presentation, which occurred at the Lying-in-Asylum, in which spontaneous evolution occurred, &c.

Regular Meeting, April 24th. — *Dr. Post* related the appearances presented on *post-mortem* examination of a young man, eighteen years of age, who, during the last two years had suffered from pain in the head, and purulent discharge from the ear, and from whose ear *Dr. Blakeman* had removed a polypus three days previous. The patient had been sufficiently well during the whole period, to engage in his ordinary mechanical employment, and had been able to attend to his business after the operation, until yesterday. He went to bed well last night, felt indisposed this morning, but was still able to set up. Between 7 and 8 A. M., he felt more pain in his head than before, and soon after, expired. The operation was a painful one, but he was better the following day than he had been for some time.

On examination of the brain after death, a large quantity of thick purulent and foetid matter flowed from an abscess of the size of a hen's egg, in the left side of the middle lobe of the brain. The walls of the abscess were lined with a thick and rough false membrane, of a grayish colour. The abscess communicated with the left lateral ventricle. There was also an opening through the *dura mater*, and a communication of the abscess with the labyrinth. There was necrosis of part of the temporal bone, which was the source of the matter. It is doubtful whether it had its origin in the bone or in the brain. *Dr. P.* thinks that it originated in the brain, and that the bone was affected secondarily. There was no paralysis, and no impairment of the intellectual faculties. The immediate cause of death was supposed to be the bursting of the abscess into the lateral ventricle. There had never been any injury of the head. He had broken his thigh a year before.

Dr. Post also mentioned the case of a sailor, in whom purulent infiltration of the lower lobe of one lung was found, after death by pneumonia, on the *fourth* day after the attack. Nearly the whole of the remaining portions of both lungs were in the state of red hepatization. Death was preceded by extreme dyspnœa.

Dr. Isaac Wood related the case of a young lady who fell a few months since, and struck her thigh on a stone sill; the pain felt at the time, was like that caused by striking the nerve at the elbow. Several weeks were suffered to elapse before she was seen by any physician. *Dr. W.* found a fluctuating tumour, five or six inches in diameter, beneath the fascia, on the back part of the thigh. She is subject to fainting, particularly on taking exercise, as in riding out. She experiences a sensation of fulness of the head when the part is touched, and of excessive pain when it is pressed on its centre. She has lately been

troubled with neuralgic pains in both shoulders. The tumour is diminishing in size, and becoming more solid. The general health of the patient is good. The functions seem to be all well performed. Dr. W. thinks it may be an injury which has produced inflammation of the sciatic nerve, and of its covering.

Dr. Hoffman related an interesting case of glossitis which occurred at the New-York Hospital. The patient was a young, robust, healthy-looking man, with a fair, florid complexion. He first noticed a swelling under his tongue, which was not attended with much pain, the day before he entered the hospital. The swelling was evidently that of the sublingual gland; it raised the tongue, and produced some swelling under the chin. When first seen, the breath of the patient was noticed to have a strong mercurial odour. He was ordered a dose of calomel and jalap, on the evening of his admission. The next day, when Dr. H. first saw him, he was bled, and had leeches applied, followed by poultices. His tongue then swelled rapidly, and reached to the roof of his mouth, producing dyspnœa and difficulty of swallowing. He was now bled to syncope, and an incision was made through the integuments under the chin externally; the edges of the incision receded, but the loss of blood from it and the opening only afforded partial relief. Free incisions were then made the whole length of the tongue itself, with immediate relief of the symptoms; and in a few days, all the troublesome symptoms had nearly disappeared. The tongue is now thrown to the left side like that of a paralytic, but it does not affect his speech. Dr. H. thinks that he would probably have suffocated without the incisions in the tongue; the tongue now looks thinner than natural. The symptoms were very formidable in forty-eight hours from the time of their first appearance. Dr. Hoffman has noticed a mercurial odour of the breath in patients with fracture of the lower jaw, and also in those with diseases of the salivary glands, where mercury has not been taken. Dr. Wood has also noticed the same thing.

City Inspector's Report. — We have extracted from the valuable tables of Dr. Dunnel, such portions as seemed to us to embrace the most important conclusions. The intention of the Author in preparing these tables, cannot be too highly praised. Yet too much dependence should not be placed upon their results. Tables of statistics, when constructed under the most favourable circumstances, can only *approximate* the truth; but in a great city like our own, where the ignorant and careless of the profession abound, such tables may serve only to propagate error.

Disease.	WHITE.		BLACK.		January	February	March	April	May	June	July	August	September	October	November	December	TOTAL	Under one year.														
	Male	Female	Male	Female														1 yr. to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	Unknown.		
Epilepsy - - - -	2			1													14	1	1													
Hydrophobia - - -	10	10	2		4	1	1	2	1	3	2	1				1	2	1	1				1	6	3		1	1				
Insanity - - - -																																
Lock Jaw - - - -	16	3		2	1		1	1	1	1	1	2	2	2		1	24	2	2	1	1	2	4	1		1						
Croup - - - -	100	70	6		13	10	11	6	5	3	5	5	5	4	7	8	13	57	20	33	8	1	1									
					7	10	7	2	3	3	5	1	1	1	1	1	12	22	15	29	3	1	1			1	2					
Whooping Cough - - -	90	117		6	1	1	1	1	1		1	1			1	2	182	38	30	19	3											
			5		3	2	5	4	4	8	2	5	26	30	15	10	7	39	39	34	5											
Lungs, Bleeding from - -	19	5	1	7			3		1	1	1	1	2	1	2	6	219	1	3	1												
					1				1	1	1							2	1	4		1										
" and membranes inflamed or congested - - - -	274	210		4	32	33	45	35	20	17	11	10	8	10	21	32	29	97	35	23	7	2	18	33	26	19	9	3	1			
			32		16	26	32	21	12	9	13	16	14	15	19	14		67	36	29	9	9	13	14	10	6	5	7	4			
					4	4	4	6	4	1	1	1	1	1	1	2	542	9	4	3	1	4	4	3	3	1	1					
" Gangrene of - - - -	2				26	1	6	4	3	1							2	7	3	7	1											

Twenty are registered as having died of *Asphixia*; forty-eight of Palsy, of whom thirty-one were past the age of forty years.

Disease.	WHITE.		BLACK.		January	February	March	April	May	June	July	August	September	October	November	December	TOTAL	Under one year.												
	Male	Female	Male	Female														1 yr. to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	Unknown.
Lungs, Consumption of - -	622	475	61	67	44	50	51	39	55	42	45	49	40	56	55	66	1225	7	10	20	20	49	145	176	84	63	34	9	5	1
" Inflammation of Stomach	28	33	1	3	7	10	8	9	3	7	4	1	3	4	1	6	11	8	1	2	5	5	14	18	9	3	2	1	1	1
Bowels, Inflammation of - -	85	58	4	9	3	1	2	2	3	2	7	4	1	2	1	4	5	62	4	2	1	2	10	4	8	6	5	1	1	1
" Ulceration of - - -	2	3	1	9	3	1	8	6	4	8	12	17	9	8	4	5	3	156	30	10	9	7	4	2	1	3	3	3	1	1
" Cholera Morbus - -	13	11	1	1	1	1	1	1	1	6	3	8	9	4	5	3	7	7	1	1	1	1	1	1	1	1	2	1	1	1
" Infantum - - -	227	190	1	2	1	1	1	1	1	1	2	1	1	1	1	1	25	136	76	15	1	1	4	1	4	1	2	1	1	1

"Among the deaths from Inflammation of the Lungs and Membranes are classed deaths reported by Pleurisy, Peripneumonia, Bronchitis, Cold, Catarrh, Influenza, and Pneumonia Typhoides."

In addition, fifty-five cases are recorded as from "Inflammation of the Chest," of which twenty-six occurred during the first year. It and forty-six before the age of five years; twenty-eight of these cases terminated fatally during the first four months of the year. It is highly probable that a large proportion of these cases were the Pneumonia of children. The deaths from Dropsy of the Chest were fifty-one; from Inflammation of the Throat twenty-eight, of which, eighteen were under the age of five years.

Disease.	WHITE.		BLACK.		January	February	March	April	May	June	July	August	September	October	November	December	TOTAL	Under one year											Unknown.				
	Male	Female	Male	Female														1 yr. to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90		90 to 100			
Cholera, Infantum - - -			10	10							5	3	3	2	9	6	437	8	1	1													
“ Diarrhea - - - -	51	54	10	10	1	3	1	1	2	2	3	4	8	9	3	4	189	9	1	9	1	1	2	4	2	1	2	1	1	1	1	1	
“ Dysentery - - - -	83	64	6	6	1	2	2	1	4	2	1	1	1	9	1	1	121	4	3	1	1	3	1	2	6	2	1	2	2	2	2	2	1
Liver Inflammation of - -	23	21	2	1	1	3	4	1	5	4	2	4	5	1	2	2	150	1	1	1	1	1	1	3	5	6	3	2	1	1	1	1	
Heart, or Pericardium, inflamed	8	5	1	3	2	1	1	1	1	1	1	1	1	1	2	1	48	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	
Fever, [type not named] -	30	21	4	1	4	2	2	1	2	5	4	3	3	5	1	3	14	3	2	4	1	1	5	4	2	2	1	8	1			1	
Fever Intermittent - - -	4	5			1	1	3	3	1	1	1	3	1	3	1	3	56	1	1	1	1	1	1	1	1	1	1	1					
“ Remittent and Bilious -	49				3	1	3		1	1	2	1	2	8	3	5	9	7	4	6	4	2	9	5	7	2	3					1	

Thirteen cases of death by Cholera are reported; twenty-three by Worms, all under the age of ten years; ten cases of Schirrus of the Liver, all above the age of thirty years.

[illegible]

	WHITE.		BLACK.		January	February	March	April	May	June	July	August	September	October	November	December	FULL TOTAL	Under One year	1 yr. to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	Unknown.
	Male	Female	Male	Female																											
Total Deaths - - -	3801	3103	313	314	559	575	621	538	494	490	795	830	798	660	569	53	7533	29510	83	802	325	299	761	840	564	328	261	148	82	21	41
Still Born - - - -	589	182	23	26	29	36	22	20	23	20	23	30	28	21	16	21															
					18	10	11	15	15	16	13	18	17	16	14	19															
					2	2	2	1	2	3	3	2	1	1	1	5															
					3	2	1	3	4	2	3	1	1	3	1	2	520														
Total Internments - - -	4990	3257	336	340	611	623	656	578	538	531	837	941	945	701	592	600	8053														

WHITE MALES	1052	467	382	165	132	340	472	322	197	136	59	42	6	28
WHITE FEMALES	841	465	370	140	140	338	290	82	104	98	79	36	12	10
BLACK MALES	84	28	20	10	12	44	51	1	32	16	13	4	6	1
BLACK FEMALES	74	23	30	10	15	39	47	27	11	14	6	4	2	2

Rate per cent. of deaths of each
class between certain ages.

WHITE MALES	-	Under 5 years	25	22	2.19	1.75	4.51	6.26	4.27	2.61	1.8	.78	.63	.37
WHITE FEMALES	-		42	21	1.85	1.85	4.48	3.84	2.41	1.38	1.3	.63	.13	
BLACK MALES	-		1	75	.13	15	.45	.67	.42	.21	.17	.05	.1	
BLACK FEMALES	-		1	68	.13	.19	.65	.62	.35	.14	.18	.07	.07	
PER CENT. TOTAL	-		50.91	4.31	3.96	10.1	11.41	7.47	4.35	3.46	1.83	1.46	.54	

Note.—Four died of Inflammation of the Bladder; one of Diabetes; seven of Cancer of the Womb, four of whom were from thirty to forty years; seventeen from Puerperal Fever; twenty in Child bed; thirty from Scrophula; five from Morbus Coxarius; fifteen from Syphilis, of whom five were males, ten females, four of which only, occurred before the age of twenty; these four occurred during the first year.

"Under deaths from Marasmus are included deaths by Decay, Debility, Tabes Mesenterica and Atrophy."

“*Remarks.*—By this report it will be seen that the deaths in 1838 were 679 less than in 1837. Precisely the increase of 1837 over 1836.

“It may be well, for the gratification of those who have not the time or taste to enter into the investigation, to subjoin a running commentary upon some of the details herein presented.

“There are several interesting results to be gleaned from the precise and peculiar mode of arranging these tables, and which could not be shown by any other method.

“Leaving others to account for the causes, while the facts are simply placed before them, I will premise, that while the total of deaths has been 679 less, the variation in prevalent diseases has been immense; from a decreased mortality of 1664 upon some, to an increase of others of 1209.

“The decrease has been chiefly upon the following diseases, viz: of Scarlet Fever, 322; Typhus, 234; Consumption, 233; Convulsions, 178; Measles, 159; Small Pox, 79; Fever, 74; Teething, 96; Inflammation of the Chest, 40; Diarrhæa, 30; Drunkenness and Delirium Tremens, 31; Child-bed, and Puerperal Fever, 24; Dropsy, 19; Bleeding, 12; Mortification, 10; Old Age, 8; and Epilepsy, 5; and 28 less were drowned.

“Of the diseases that have increased, the following stand most conspicuous: of Cholera Infantum, 184. More deaths of this disease occurred this year than ever before, with the single exception of the cholera year, 1834, when it was only 38 greater. In the year 1832, it was 103 less than in this. The increase of Marasmus is 178; Hooping Cough, 156; Unknown, 102; Apoplexy, 53; Croup, 31; Remittent Fever, 28; Drinking cold water, 20; Malformation, 31; Organic disease of Heart, 18; Bleeding from Lungs, 13; Dropsy of Chest, 13; Scrofula, 12; while of casualties, 12 more occurred, and 8 more were killed or murdered.

“The increase of Apoplexy, Unknown, and drinking cold water, occurred chiefly during the extremely warm part of last summer.

“The number of Still-born and Premature, is precisely the same as last year. There is a curious circumstance connected with this casualty, that deserves a remark; that is, the great disproportion of white males to white females, and which does not take place between the sexes of the blacks.

“The greater fatality of male life in the white race commences before birth, and continues throughout the first year of existence. This year almost 51 out of every 100 died before reaching five years of existence.

of whom over 25 were white males, and 22 females, — the rest blacks. This inequality does not continue so great after passing the year ; there being but trifling variation, (although the males exceed,) between 1 and 2 ; 2 and 5 ; 5 and 10 ; until between 10 and 20 females predominate ; between 20 and 30 they are nearly the same ; but between 30 and 50, even to 60, the males are almost double in number to females. Between 60 and 70, they vary a trifle ; between 70 and 80, the females outnumber the males, but from 80 upwards, they are equal.

“ Throughout the whole series there is a total excess of male deaths, of nearly 10 per cent., and this cannot arise from exposure or casualty alone. There is not a disease of childhood, except whooping cough and measles, to which the male deaths do not preponderate. The same thing occurs, with few exceptions, at the other periods of life, excluding the peculiar diseases of females, and old age. Of casualties of all kinds, the males exceed females only 148.

“ According to the last census, the female population was not 5 per cent. greater than the male. This constant loss of male population (which, taking the whole series embraced in my last year’s report, of 32 years past, has been still greater, having been nearly 12 per cent.,) is in some way or another supplied, or, inevitably, the male race would eventually become extinct. It is for the purpose of ascertaining the facts that a register of births is desirable.

“ It is singular, in regard to the deaths of the coloured population, that the males and females differ so little ; the coloured females exceed the males only one.

“ Of those diseases so fatal under the year, some of them are fatal within a few days of birth. Of Convulsions, 638 died — 501 of them under the year ; but 159 of them were not 7 days old ; between that and 21 days, 177 died ; between that and 2 months, 79 ; and 28 between that and 3 months, leaving but 118 to divide between the remaining three-fourths of the year. Of Malformation and Premature, 77 died under 20 days.

“ I have placed in the tables, on a line with the sex and age, the nativity of the persons ; in order, if possible, to show the effect, if any, this may have upon disease. By a careful examination of which it will be seen, that of Apoplexy 49 were natives, and 104 Europeans, of Palsy, Epilepsy, and Insanity, one half the males were Europeans, and of bleeding from the Lungs, they exceed the natives. Of Consumption, 1225, there were natives 665, and Europeans 539 — 11 of adjoining countries, and 10 unknown. The deaths by this disease, excluding casualties of all kinds, is 1 out of 5 of the whole ; of which 1 out of 9,293 are white

natives, 1 out of 4.566 blacks, and 1 out of 2.877 Europeans. Of Inflammation of the Stomach 28 were natives, and 36 Europeans. Organic disease of the Heart, 27 natives and 28 Europeans. Of Child-bed and Puerperal Fever, 16 natives to 21 Europeans. Of Intemperance and Delirium Tremens, 40 natives to 55. Suicides, 23 natives to 19. 41 natives and 44 Europeans died of casualties. Out of 22 deaths from drinking cold water, 19 Europeans ; and of Old Age, 57 natives, 54 Europeans, and 3 from the adjoining British Provinces.

"I have divided Europe into different sections, in the tables, because of the greater number from some sections ; they are all included in these calculations.

"It would tend very materially to an insight into these matters if the census gave any clue to the proportion of native population of this city ; but as it does not, much must be left to conjecture.

"I have made no estimate of the deaths proportioned to the population ; because it will necessarily be very unsatisfactory, until an accurate register is kept, based upon the deaths, and not upon the interments only, in this city.

"The tables are as extensive and minute as can be made ; unless the various occupations of the individuals could be obtained, — a thing impracticable under the present law.

"The novel plan of arranging these tables, introduced for the first time last year, has, it will be perceived, been carried into still greater minutæ.

Memoir of Dr. Physick. By J. Randolph, M.D. — THE last number of the Philadelphia Journal of Medical Sciences contains the Biography of the late Father of American Surgery, embellished by a lithographic portrait, from the original painting of our fellow-citizen, H. Inman, Esq. Such an undertaking, so well executed, cannot fail to prove interesting, not only to the medical profession in this country, but abroad also. The great character of Dr. Physick, both as a surgeon and as a man, has not received, for it needed no extravagant panegyric to set it forth to the profession as an example. The simple narrative of his early struggles, his triumphant career, his golden old age, is all that a generous mind requires to stimulate its efforts. There is no eloquence like that of a great and good life. Abstract moral truth touch us not : moral lectures, however they may awaken a momentary enthusiasm, make no permanent impression ; it is for this reason we have much reason to thank Dr. Randolph for what he has accomplished. We can find but one fault, and that is, the memoir is too short : we get a glimpse of many a good thing, but nothing more. How interesting,

for instance, would it be to know more, through this medium, of the private life of John Hunter, the greatest mind that our profession has yet produced; yet an apology for this deficiency is found in the fact, as stated by Dr. Randolph, of Dr. Physick's unconquerable disinclination to appear before the public as an author. The profession will long have another cause of regret from the same source, in possessing no authentic records of his past experience and singular skill. We can hardly pardon this feeling in Dr. Physick: it is certainly the duty of every physician, not only to acquire knowledge for personal use, but to transmit it from the store-house of his own mind for the benefit of posterity.

Dr. Physick was born A. D. 1768. Having received the degree of A. B. from the University of Pennsylvania, he commenced the study of medicine in 1785. After three years attentive study of his profession at home, he embarked for London. "Dr. Physick's sole object in going abroad, was to acquire medical information. He had no desire to partake of the gayeties and amusements of a European capital. I repeat, with him the grand consideration was the acquisition of knowledge, to this he applied himself with the most ardent devotion, and never permitted amusements of any kind to turn him aside from its pursuit." While in London, Dr. Physick became the pupil and friend of John Hunter, and by his influence was elected house-surgeon to St. George's Hospital: after remaining in this situation a year, he received his diploma from the Royal College of Surgeons. Leaving London for Edinburgh, he continued his professional studies for a year longer, after which period he received the degree of M.D.

Dr. Physick returned to Philadelphia in 1792, and commenced the practice of his profession; at first, his progress was slow, but the yellow fever appearing in Philadelphia in 1793, gave him an opportunity of attracting public attention; he was appointed physician to the Fever Hospital. In 1794 he was elected surgeon to the Pennsylvania Hospital. This period was the dawn of his usefulness and fame.

The principal improvements introduced by Dr. Physick into the practice of surgery were, an improved method of treating ulcers, fractures, dislocations, diseases of the hip joint, and morbus coxarius; a new operation for the cure of artificial anus; a new instrument for excision of the tonsils; a new aneurismal needle, &c.

In 1805, Dr. Physick was elected Professor of Surgery in the University of Pennsylvania. "His manner as a public lecturer was extremely grave, dignified, and impressive. His style was simple, clear, and chaste. He was uniformly careful never to say too much. His choice of language was remarkably good, and he possessed the happy

faculty of communicating knowledge agreeably and clearly, to a degree which I have never known surpassed. Perhaps one great reason of this was, that he never undertook to instruct others upon subjects which he did not clearly comprehend himself. He attempted no display of oratory; neither did he permit his reason and imagination to run wild in the regions of theory and fancy. He found much better employment for his mind in constantly studying the realities of life, and in reflecting upon the best methods of promoting the welfare of his fellow-creatures. His lectures were carefully prepared and written out. He did not at all approve of extemporaneous lecturing; as he thought, that in lecturing upon scientific subjects, and more especially such as involved the lives and happiness of our fellow beings, no man had a right to place so much confidence in the strength of his memory as is implied in that practice."

In 1819, Dr. Physick resigned the Chair of Surgery, and was transferred to that of Anatomy, which he continued to fill until 1831. In 1822, he was elected President of the Philadelphia Phrenological Society. In 1824, he was chosen President of the Philadelphia Medical Society. In 1825, he was elected a member of the Royal Academy of Medicine in France, being, probably, the first American who had received that honour.

Dr. Physick died of organic disease of the heart, in December, 1837.

"It must be admitted, that, by the community at large, Dr. Physick's private character was but imperfectly understood. This was owing to the habits of perfect seclusion which he contracted, and to the slight intercourse, other than professional, which he permitted himself to enjoy with his fellow-citizens. It must not be supposed, however, that this isolation arose from moroseness of character, or want of inclination to mingle with society. A satisfactory explanation may be found in the entire self-abandonment with which he devoted himself to his professional engagements. For the reasons above mentioned, he was supposed, by some, to be stern and unfeeling; and wanting in the kinder sympathies of our nature. There could not be a greater misapprehension. His feelings were tender and susceptible in the extreme"

Two Cases of Lithotrity. By ALBAN GOLD-SMITH, M.D., late Professor of Surgery in the College of Physicians and Surgeons, New-York.

CASE I. Mr. T. aged 30, a native of Louisiana, of slender form and delicate constitution, having for several preceding autumns suffered from repeated attacks of intermittent fever, applied to me, in July, with a stone in the bladder. On sounding him, I found that the stone was not

large, but the bladder was extremely irritable, and there was some mucous discharge from the urethra. I commenced the daily use of the catheter, demulcents, &c., for the purpose of allaying the irritability of the bladder.

August 20. I introduced the *brise-pierre*, and grasping a stone, an inch in diameter, broke it once. The next day there was pain over the pubis, and an aggravation of all the symptoms. Some *detritus* passed; under the usual treatment, however, the pain, &c., soon subsided.

September 3. I crushed the stone twice; no irritation followed; a considerable quantity of *detritus* passed after this sitting. He had seven more sittings, none of which were followed by any irritation of consequence. I allowed four or five days to intervene between each sitting, and I found that after the seventh operation, that the last fragment had passed, and that all the symptoms of stone had disappeared. The calculus was composed of uric acid.

CASE II. Mr. P., aged 60, farmer, a native of England, residing near Morristown, N. J., applied to me in September last, with the symptoms of stone in the bladder. On sounding him, I found a middle sized stone; I recommended Lithotrity, and went to Morristown April 11, to perform the operation. I introduced the *brise-pierre* of Huerteloup, grasped a stone an inch and a quarter in diameter, and broke it once. Some slight irritation followed, but the next day it passed off without preventing his ordinary attention to business.

April 20. I gave him another sitting, and broke the stone twice; no irritation followed, and he passed a large quantity of *detritus*.

I did not operate again until May 18, when he came to my office; I then broke several fragments. Every fourth day after this, for six successive sittings, I continued to break up portions of the stone. After the sixth sitting, all the symptoms of stone subsided; he has returned to Morristown entirely relieved; during the whole process, he suffered very little pain, and was not confined an hour. The calculus was composed of phosphate of lime.

Abstraction of the Uterus.—Since the printing of Dr. Griscom's paper on the "Abstraction of the Uterus" was finished, we have received a communication from Dr. H. F. Noyes of Pulaski, N. Y., the physician who was called in consultation to the unfortunate case, related as having occurred there. We regret exceedingly that Dr. Noyes's communication did not arrive in season to be introduced into Dr. Griscom's paper, but we have also the satisfaction of knowing that the par-

ticulars already stated, are substantially correct. Some portions of the history of the case being more minutely detailed by Dr. Noyes, we shall publish a part of his letter.

“On the morning of April 29th, 1838, I was called in consultation with Dr. * * * * * to see Mrs. W. who was in labour, and was said to be dying; I arrived about one o'clock, A. M., and found myself in the midst of one of the most unparalleled scenes of distress and agony that could well be imagined; the doctor delivering what he called an “adhered placenta” — the father and husband of the patient, and the female attendants, uttering loud lamentations, and the patient herself, at the top of her voice, telling the doctor he was killing her, and begging him to let her alone: I placed my finger upon the pulse and found that she was rapidly sinking, at the same time inquiring of the doctor what was the nature of the case; he told me that it was an adherent placenta, such as he had never before met with in his practice, or read, or heard of before, and that he was nearly through with its delivery, and should finish in a minute or two, which he did, in about the time specified, remarking to me “that it comes like tearing raw sheep-skin,” that the placenta adhered to the neck and mouth of the uterus, and that there were some shreds of it left, but that he thought they would be discharged with the lochiæ.” I told him that the patient was dying, but at his request made a hurried examination *per vaginam*, found shreds of cellular tissue and membrane reaching nearly or quite to her knees, but found no uterus: on telling him this he remarked that it was there, and had contracted well, and placing his hand above the pubis, he said he could feel it contracting. By this time, the woman, from the relaxation of the muscular power and the near approach of death, began to slide from her seat, (made by tying three chairs together) and was prevented from descending to the floor by my seizing her under the arms and requesting assistance to lay her on the bed: after which she lived about ten or fifteen minutes. From the time of my arrival to her death was about twenty or twenty-five minutes; the attendants informed me that the doctor had been at work an hour and a half in removing the supposed placenta before I arrived. I would, finally, remark that the patient was a large and rather fat woman, that this was her fourth child which was large and healthy, that the labour had continued about fifteen hours, the doctor himself admitting that it was tolerably easy, and that the woman was quite comfortable after the delivery, until he commenced operating.” The same letter contains the information that this individual is held to bail for the sum of \$500 and that his trial will probably take place the ensuing autumn.

HAVING finished the first number of our new undertaking, we offer it to the profession as an illustration of the plan we have adopted, and of the course we mean to pursue. We do not wish to be understood to state that no improvements are contemplated, for there are difficulties attendant upon every new undertaking, that will prevent the completion of what is known to be right, and of imperfections, consequent upon inexperience, which time and practice alone can correct. The great object of our enterprise, is the collection and publication of original matter. In this, the profession must join and help us; not only with counsel, but with the intellect and pen.

It must be recollected, that good essays upon scientific subjects are not efforts of the imagination, but the result of much experience and observation. We want no theoretical speculations, however brilliant and well written; we want plain practical common sense, the result of good opportunities and much reflection. The editors, therefore, beg leave distinctly to repeat to those who wish the undertaking success, that they must come forward when called upon, and give their assistance. For ourselves, we mean carefully and honestly to discharge our duty, by using every effort in our power to elevate the standard of the professional character and to promote the feeling of union and fellowship.

It will be observed, that our notices of new publications occupy but a small portion of the volume. It is our intention to condense, still more, this portion of the work; not by diminishing the number of pages allotted to it, but by making each notice as concise as possible. Our plan, it will be perceived, is to intrust each work to an individual, who, from the peculiar direction of his studies, appears to us most likely to fulfil the duty assigned to him. By adopting this method, we free ourselves from all responsibility, as to individual opinions that may be expressed. We are responsible, however, for the selection of proper persons, and are guaranties that nothing of personal abuse or provocation,

shall enter our pages. Indeed, we believe that some who read this part, will be apt to think that rather *too much good feeling* pervades it. This will be explained, when our readers are told, that almost every work noticed in the present number, was selected as worthy of particular commendation. Of two works sent us for review, one has received very little praise. It has been a matter of some discussion with us, whether we should be silent in relation to books that are unworthy of praise, and our conclusion is, that we will notice every work, at least every American work, that is put into our hands, with as much honesty and fairness as we can. If the standard of criticism was higher than it is, and if the profession felt its power more deeply than they do, no one could doubt its beneficial results.

In the arrangement of the third part, or that of "Scientific Intelligence," we have introduced, in the first place, the "Proceedings of our different Medical Societies." This idea, we believe to be a good one. By making such proceedings public, we shall contribute to remove any unjust prejudices that may exist in relation to such associations, and, at the same time, give to the profession at large, some idea of the abilities and opinions of many of their fellow-practitioners. We have long been of opinion, that the chief good in such associations is the facilities they afford to judge of the capacity and acquirements of those we are associated with, and are liable to meet every day in consultation.

The extracting of matter from foreign sources forms the least ambitious part of our plan. It has been thought that a translation of an essay on a subject not much cultivated in this country, and not accessible to a majority of our readers, might prove acceptable; accordingly it has been introduced. In the other selections, our intention has not been entirely fulfilled, owing to a miscalculation, on our part, as to the space the original papers and bibliographic notices would occupy. Our intention is to make these selections few and full, rather than numerous and imperfect. At first sight, this may not seem the best arrangement; but on reflection, we think it will appear, that if the acquisition of knowledge is the object, it is better to know much of a few subjects, than to gain but a glimpse of many. This subject is, however, open for further consideration. In conclusion, we would pay the publisher a deserved

compliment for the style in which the work is executed, and express our just appreciation of his enterprise and courtesy.

College of Physicians and Surgeons. Dr. Delafield, Professor of Midwifery, and Dr. Alban Gold-Smith, Professor of Surgery, have resigned their Professorships in the College.

Dr. Robert Watts, Jr. of this city, has been appointed Professor of Descriptive Anatomy. This appointment, we believe, will give universal satisfaction to the profession. Dr. W. has already passed the *ordeal* of Lecturer on Anatomy, in which capacity he gave evidence of uncommon talent. Dr. W. Parker of Cincinnati, has been appointed Lecturer on Surgery, and Dr. J. R. Manley of this city, Lecturer on Midwifery. The new practice of appointing men as Lecturers, before establishing them as Professors, is a vast improvement upon the old plan. But it is not equal to the mode by *concours*. This subject is of great importance, and will engage our particular attention at an early period.

New-York Hospital. Dr. A. H. Stevens, has resigned his situation as one of the attending surgeons of the Hospital; the Governors, in acknowledgement of his services during a period of more than twenty years, have appointed him a consulting surgeon to the institution.

City Medical Appointments. Dr. A. Vaché has been appointed resident physician to the Bellevue Hospital, *vice* Dr. Wm. Wilson, removed; Dr. Tonelier, physician to the Halls of Justice, *vice* Dr. Gilman, removed; and Dr. W. A. Walters, City Inspector, *vice* Dr. H. G. Dannel removed: these appointments are all political. We take this opportunity to express our high sense of the manner in which the late City Inspector has discharged the duties of his office. The present officer, Dr. Walters, informs us that it is his intention to follow Dr. Dannel's plan, and to improve it if possible.

The trial of Septimus Hunter for mal-practice in the case reported by Dr. Griscom, was concluded on Saturday, June 15.

Verdict : Manslaughter in the fourth degree, with a recommendation to mercy. *Sentence* : — Imprisonment for one year in the Penitentiary. The previous good character of Hunter, was the probable reason why this, the mildest punishment that the law could inflict, was imposed upon him.

Dr. Paine's New Work. The Medical and Physiological Commentaries, by Dr. Paine, are now in press, and will be published some time during the ensuing season. From our personal knowledge of Dr. Paine as an acute and independent observer, from his extensive acquaintance with the literature of the profession, as well as from his high standing as a practitioner, we have every reason to believe that his forthcoming work, constituting two large octavo volumes, will be one of no ordinary interest. The subjects to be examined in it, as stated in the prospectus, relate to obscure and controverted questions in pathology ; and embrace a critical review of some of the most important doctrines in physiology and medicine.

Dr. Stewart's Translations. Dr. James Stewart of this city has now in press, a translation of Billard's well known and valuable work on the Diseases of Infants. He is also preparing a translation of M. Berton's work on the Diseases of Children. This, like the former work, is founded on extensive clinical, physiological, and anatomical observations ; and is intended to extend the system adopted by M. Billard, to the whole period of childhood, from the time of dentition up to the age of puberty.

Dr. C. A. Lee of this city, proposes, as will be seen by referring to the advertising sheet, a new Medical Flora of North America. This work, we are informed, is as yet entirely prospective. Dr. Lee, however, has for some time been directing his attention to the subject, and brings to his labour a mind already trained to careful and laborious investigation.

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FOR OCTOBER, 1839.

ART. 1. *A Comparative View of the State of Medicine in the Years 1733 and 1833, an Introductory Lecture.* By JOSEPH MATHER SMITH, M.D., Prof. &c.

IT is a profitable, and at the same time, an agreeable occupation to look back into the history of the past, and to remark the changes which the healing art has undergone in advancing from age to age. In such a retrospect, it is curious to observe how tardily medical improvements have taken place, and how slight is the impression they produce on the mind, until, collectively, they have acquired a magnitude that renders them strikingly conspicuous. The periods within which great revolutions have occurred in medicine, vary exceedingly in length. Whilst some of them extend over long intervals of time, others embrace, comparatively, but a few years. Among these periods there is one, which, more than any other, has been, specially, fertile of various and signal improvements. I allude to that which comprises the last one hundred years. As the advances of medicine in this space of time are worthy of being recounted on an occasion like the present, I would respectfully invite your attention to a notice of them, and especially to a review of the state of medical science at the two epochs which bound the period in question, namely, the year 1733, and the year 1833.

It would be a subject of interesting inquiry, how far the pro-

gress of medicine has been influenced by political power, popular opinions, discoveries in other departments of science, and improvements in the arts. Such an inquiry would doubtless disclose many of the causes which have promoted and impeded the progress of the healing art. Every important change, in the moral and political world, has a bearing more or less direct upon the interests of science. Circumstances apparently incidental, and, in themselves, at the time, of little moment, are sometimes ultimately productive of results far exceeding, in magnitude and importance, the boldest conceptions of the imagination. Influences which are nascent to-day, may to-morrow annihilate those that have been in powerful action, and, at the same time, give energy and direction to others which had been feeble or slumbering. It is thus that, at one time, we see political events obstructing or advancing philosophy and the arts, and, at another, philosophy and the arts controlling or turning the course of political events. The interests of learning are affected more, perhaps, than those of any other human pursuit by the ever-varying circumstances with which they are proximately or remotely connected. Hence it is that, in flowing through successive ages, the great stream of science has not equally widened and deepened in equal periods of time, but has been slow or rapid in its enlargement, according as passing events have diverted from, or directed into its channel the currents of human thought.

To illustrate the extent to which the progress of medicine has been influenced by the causes referred to, would require a wider scope of research than is afforded by the limits of an introductory lecture. But though such an inquiry forms no part of our purpose, it may not be uninteresting to take a general view of the epoch with which, in reference to medicine, we design to compare the present. History is the more attractive when it assembles contemporary individuals and synchronistic events, and faithfully exhibits their distinguishing characters and relations to one another. Leaving the present then, and returning back through the last one hundred years, let us contemplate the world as it was in 1773.

In looking around on the state of things at this period, our attention is first arrested by the principal contemporary sovereigns. On the British throne is George II. in the seventh year of his

reign. France is governed by Louis XV.; Spain by Philip V.; Germany by the Emperor Charles VI.; Poland by Augustus; Prussia by Frederick William I.; Denmark by Christian VI.; and Russia by the Empress Anne. At the head of the Roman hierarchy is Clement XII., and Mahomet V. rules the Ottoman empire. Under the sway of these leading potentates the political, social, and religious concerns of every civilized nation are so regulated and governed as to secure the permanence of regal authority.

Subject to the reigning princes, on every side, are men distinguished in all the higher pursuits of life. It is the age in which flourish, as statesmen or warriors, Sir Robert Walpole, the Duke of Villars, Admiral Vernon, the Earl of Stair, Prince Eugene, Count de Saxe Maurice, the Earl of Bathurst, and Count de Belleisle. Among the writers, chiefly miscellaneous, are Montesquieu, Lord Kames, Fontenelle, Voltaire, Richardson, the Earl of Chesterfield, Bolingbroke, Rollin, J. B. Rousseau, Swedenborg, and Cadwallader Colden. In the circle of junior writers of the same class, are Hume, Johnson, Fielding, and Franklin. Of the poets risen, or advancing to the summit of their reputation, are Pope, Blair, Swift, Allan Ramsay, Thomson, Dyer, Young, Philips, and Metastasio. In divinity and ecclesiastical literature stand pre-eminent, Butler, Sherlock, Middleton, Mosheim, Hoadly, Warburton, Stackhouse, and Massillon. Below these in age, but equally gifted, are Doddridge, Wesley, Thomas Newton, and Edwards. In mathematics are Wolff, Simpson, Halley, Maupertius, Maclaurin, Euler, and Bradley. In architecture and the imitative arts of painting and statuary are, Zamboni, Rysbrack, and Hogarth, all in the maturity of manhood. In music, Handel, at the age of nearly half a century, is without a rival.

Next to these eminent individuals, we may notice the more generally interesting events of 1733. The death of Augustus of Poland occurring in this year, gives rise to a new continental war. The Emperor resolves to place the Elector of Saxony on the throne of that kingdom, and is opposed in his scheme by France, Spain, and Sardinia; these latter powers favouring the claims of Stanislaus. Prince Eugene, at an advanced age, is again called to head the imperial troops, after being in retire-

ment for fifteen years in Italy. It is in this year that the accomplished and chivalrous Oglethorpe is engaged in founding the colony of Georgia; and that Berkeley, whose visit to America a few years before, and whose liberal benefactions to our infant literary institutions render his name familiar to us all, is created Bishop of Cloyne. It is the year in which the publication of the infidel writings of Voltaire occasions a warrant to be issued for his arrest, and his letters are ordered to be burnt. It is at this time, also, that we observe the origin of Protestant missions, in the project of the United Brethren for evangelising the world, and the embarkation of the first three missionaries for a foreign land.

Such are some of the living individuals, and passing events of 1733,—individuals whose actions and works illustrate the end of the first third of the eighteenth century, and events of deep interest in reference to the future. A more detailed view of the state of things at this period, would show that the strong arm of power, however heavily it may press, here and there, upon the civil and religious rights of mankind, weighs but lightly upon the interests of literature, philosophy, and the arts. In these the votaries are numerous, and their achievements many and brilliant.

But who, it may now be inquired, are the prominent physicians of 1733, and how do they rank with their political, literary, and philosophical contemporaries? What are their doctrines, and their principles, and modes of practice?

In the multitude of medical men that here crowd upon our notice, may readily be distinguished those most entitled to regard. They are known by the number and character of their works, and the exalted stations they occupy. First, in the list of pre-eminence, and above fifty years of age, are Stahl, Hoffman, Boerhaave, Winslow, Cheyne, Mead, Petit, Morgagni, and Heister. Below the age of fifty, and above twenty-five, are Le Dran, Cheselden, Smellie, Alex. Monro, Albinus, Van Swieten, Senac, Huxham, Lientaud, Gaubius, Sauvages, Pringle, and Linneus. To this catalogue must be added, Boylston and Nicoll in this country. In the genius and learning of these few individuals, the medical profession is represented in its most favourable character. There are others whose talents and labours give

them a limited reputation, and place them above mediocrity; but, to name them would scarcely add lustre to the catalogue given.

Of the occurrences relating to medicine at this time, a few particularly invite our attention. It is in 1733, that Heister, Professor at Helmstadt, publishes his *Anatomy, a Compendium*, highly valued, though inferior in merit to the system of Winslow, which appeared the year previous. At the same time, Cheselden issues his splendid work on the bones, which he dedicated to Queen Caroline, to whom he had been appointed chief surgeon. Simultaneously with these publications is the appearance of Cheyne's "*English Malady, or Treatise on Nervous Diseases,*" a very popular work, containing an interesting account of his own case. Occurring at this period, is an incident, in which arbitrary power is seen sternly exercised in dispiriting genius, and frustrating an object of laudable ambition. Linneus, at the age of twenty-six, after exploring the botany of Lapland, and publishing an account of its plants, being in poverty, attempts to support himself by delivering private lectures at Upsal; but the statutes of the University allowing no one to lecture who is not a graduate, and Rosen, the professor of anatomy, informing against him, he is obliged to desist and seek other occupations. The annals of chemistry in this year are enriched by the discovery of the metallic nature of arsenic and cobalt. In regard to the epidemics of the period, the one to which the attention of physicians is universally called, is the influenza or epidemic catarrh. Commencing in America, the disease travels eastward, spreads over Europe, and ultimately extends to the Island of Bourbon, and probably over the whole earth.

Turning to another view of the era we are contemplating, let us glance at the medical institutions and general character of the profession.

In most of the countries of Europe are found sources of elementary instruction in the healing art. But the great fountains of medical knowledge are at Leyden, Halle, and Paris. Though infirmaries had their origin as far back as the time of Justinian, their number is yet small, and their organization and economy in many things defective. The only general hospitals

in London are those of St. Thomas, Guy, St. Bartholomew, and Westminster. St. George's was founded in the year on which our attention is fixed. In Paris are the Hôpitaux, Hôtel Dieu, La Pitié, La Charité, St. Louis, and a few others. The Royal Infirmary of Edinburgh, projected in 1721, and though not opened until several years afterwards, is rising into notice. These institutions, and others of a similar character in different parts of Europe, in fulfilling the humane purposes of their creation, afford little or no systematic instruction in clinical medicine and surgery. The importance, however, of practical illustrations at the bed-side is beginning to be felt as essential in a medical education.

In regard to the majority of those engaged in the practice of the healing art, little can be said in their favour. Excepting those who have enjoyed the advantages of a regular medical education, the greater number are distinguished by their ignorance and imposing pretensions to skill. The line of distinction between medicine and surgery is, for the most part, well defined and jealously preserved. The physicians everywhere take precedence, and, in England and Scotland, are incorporated into Royal Colleges; whilst the surgeons are incorporated with the barbers, and the apothecaries with the grocers. It is chiefly in the first of these classes are found the learning and science which give elevation to personal character, and claim for medicine the rank of a liberal profession. But, as if learning and science, in themselves, are undeserving of homage, it is curious to observe the extrinsic means resorted to by the most distinguished physicians of the age, in common with the members of the other learned professions, to secure respect and reverence. The means alluded to are a gravity of deportment, and a style of dress, calculated to impose on common minds, and inspire confidence in the mysteries of physic. This feature in the medical character of the day is not confined to the seniors of the profession, but is found in the youngest aspirants for practice. Indeed, it is said, that "the physicians in Hogarth's prints are not caricatures; the full dress, with a sword and a great tie-wig, and the hat under the arm, and the doctors in consultation, each smelling to a gold-headed cane, shaped like a parish beadle's staff, are pictures of real life in his time, and a

young physician, thus equipped, walked the streets of London, without attracting the eyes of passengers." Added to these means of impressing the public mind, is the general practice of writing and prescribing in Latin, the language, at this time, common to the professors of all the higher departments of learning.

These more conspicuous objects of remark being examined, our attention is next invited to the actual state of medical science in 1733. In entering this field of observation, it is obvious, that our notice of particulars must be very brief and general.

Anatomy being the basis of medical science, is of course the first study in every plan of medical education. Hence the importance of perfecting this department has always been acknowledged. The zeal and success with which it was cultivated in the earlier part of the eighteenth century, is creditable to the physicians of the times. We have before had occasion to mention the names of Heister, Winslow, and Cheselden. Availing themselves of the knowledge of their predecessors, and also of their great contemporary Ruysch, who died two years prior to the era we have in view, they were enabled to present to the profession systems of anatomy exceedingly correct and well arranged. Their works, however, are mostly confined to special anatomy, and consequently are defective in those minute views of the elementary textures and relations of parts from which are deduced many of the truths of physiology and pathology, and the rules of operative surgery. Among the more celebrated junior teachers of anatomy at this time, are Monro at Edinburgh, and Albinus at Leyden; the former having been appointed professor of that department at the age of twenty-three, and the latter at twenty. Of those more advanced in age, no one is more distinguished than Morgagni of Padua.

The chemistry of this period is nothing more than an assemblage of facts observed as occurring, under certain circumstances, when bodies act on one another at insensible distances. The laws that govern the changes that take place during chemical action, as well as the nature of the changes themselves, are unintelligible. It is true, in some instances, theoretical explanations are given; but they are, for the most part, fanciful. Such is the theory explanatory of the nature of fire and chemical

inflammation, first suggested by Becker, and afterwards adopted and amplified by Stahl—a theory which supposes a principle, called *phlogiston*, to be present in all inflammable bodies, and which is separated from them in the process of combustion; whence they are entirely changed in their qualities.

It is interesting to observe how many of the embarrassments in the medical researches of the time are referrible to deficiencies in chemical knowledge; and it is equally so, to remark how ingeniously a great amount of error is intermingled with truth and wrought up into plausible and even beautiful theories. The more prominent examples of this kind are the productions of STAHL, HOFFMAN, and BOERHAAVE. To these illustrious men is assigned, by common consent, the first rank of eminence. Their works are every where read; and their *dogmata*, promulgated, *ex cathedra*, carry with them an authority that commands general attention.

Our limits precluding a particular analysis of their respective hypotheses, we shall merely advert to their cardinal principles. To understand these, however, it is important to premise that from the time of Hippocrates, and especially of Galen, every medical theory had been founded on the assumption that the humors of the body were the seats of disease. But though humoral doctrines had long prevailed, physicians had been divided into different sects, of these the principal were the Methodists, the Galenists, the Chemists, the Mechanicians or Mathematicians, the Spiritualists, and the Eclectics. These sects had their origin in the different views and modes of reasoning prevalent among physicians, in respect to the condition of the solids and fluids in the normal and morbid states of the system. They had successively risen, and though some of them had lost their distinctive characters, the principles of all of them were extant in the earlier years of the eighteenth century.

STAHL, whose doctrines we shall first notice, was born in Franconia, and is now, at the period of which we speak, in the seventy-third year of his age. He was educated in the school of the chemists, and early in life was appointed, through the influence of Hoffman, to a medical professorship in the new university of Halle. To the interests of this institution he consecrated his life; and now, in his old age, enjoys, with his col-

leagues the satisfaction of seeing it contending for superiority with the most distinguished schools of the age. Applying himself to the study of chemistry and pathology, his genius was soon displayed in new and enlarged views of these departments of science. Of him as a chemist, and especially as the chief author of the theory of *phlogiston*, we have already spoken. We are now to regard him as the expounder of the nature of diseases.

From attentively examining the phenomena of the living human body, and especially observing the changes which substances undergo when received into it, he was led to reject the doctrines of the chemical and mechanical physicians, and to refer the various states of the system to the operations of an intelligent, spiritual power, superadded to the organization. He is accordingly regarded as a metaphysical pathologist. In fact he adopts substantially the leading tenet in the hypothesis of Van Helmont, the founder of the metaphysical school, who died in 1644.

To the power or agent in question, Van Helmont had given the name of *archeus*, and Stahl, believing it to be the rational soul, calls it *anima*. All the functions of the body, he contends, are under its control; and that, when their healthy condition is disturbed, it is immediately exerted in restoring them to a sound state. The body in health, he says, is inclined to plethora, and that the dangers and evils of this state are obviated by the *anima* inducing regular and sufficient excretions. When, in disease, the discharges are excessive, or otherwise, it is active in diminishing, or increasing them; and should its power be inadequate to the purpose, it is then the province of the physician to aid its operation. Interference, however, he believes is seldom necessary, and, when necessary, he asserts that mild measures only are required. He accordingly condemns, in general, all heroic remedies. His practice, in a word, is entirely based on the hypothesis, that the morbid actions of the system, being induced by the superintending intelligent power, are always salutary in their tendencies, and, consequently, should not be roughly promoted or retarded, but carefully watched and regulated.

In exhibiting the important truth that there is a principle in

the body which occasions elementary combinations and functional phenomena that mere physical agencies are incapable of producing, Stahl forcibly invalidates the doctrines of the chemists and mechanicians. In this respect his theory possesses superior merit. In another view, however, it is liable to objection. By relying too much on the curative power of the *anima*, his practice is often extremely inefficient. Moreover, by making the metaphysical characters of disease the chief objects of medical study, he inclines his followers to consider healthy and morbid anatomy, and diagnosis, as of little importance. The work in which his hypothesis is elaborately stated, is entitled "*Theoria Medica Vera*," and was published in 1708.

It is obvious that not until medicine shall assume the character of a demonstrative science, will physicians agree in any one system of theory and practice. The state of medicine in 1733 possesses nothing of that character, and accordingly we are not surprised to find doctrines prevailing which differ essentially in their principles. The pathology of Stahl, though supported by all his ingenuity, leaves room for the display of other theories, equally or more attractive and popular. Such is the theory of Hoffmann. This distinguished physician was born in the same year as Stahl, viz. 1660, and what is remarkable, besides being of the same age, they have, during a great part of their lives, been associate professors of the same branches, in the same university, the latter being adjunct to the former.

To a fertile genius, HOFFMANN unites great learning and untiring industry. In his medical inquiries he exhibits a mind freed from the strong prejudices of education, and bold in original research. Hitherto, as we have before stated, disease had, for the most part, been considered as depending on certain conditions of the blood. The solids had scarcely been adverted to as the primary seat of disease. Baglivi, professor of medicine and anatomy at Rome, in the course of his researches was led to the conclusion, that the primordial deviations from health take place in the moving fibres. Animated by the discovery, he abandoned the beaten tracks of the humoral theorists, and confidently asserted that disease consisted in certain alterations in the state of the solids, and that when the fluids are disordered they had become so consecutively. This novel doctrine was widely

published; but made little impression on pathology during the life of its author. Baglivi was several years younger than Hoffman, but died in 1706, at the early age of thirty-eight, leaving his name inseparably connected with a theory which is destined never to perish.

Enlightened by the original inquiries of the Roman professor, Hoffmann embraced his fundamental principles, and founded upon them a system peculiarly his own. He not only contends that diseases commence in the solids, but he explains the nature of their morbid conditions. He supposes the moving fibres to possess, in health, a certain degree of tone or action, and that deviations from this state constitute disease. If, from any circumstance, the action is morbidly increased, a *spasm* of the fibres is the consequence, and, if the action be diminished, a debility is induced which may extend to the point of *atony*. Spasm and atony of the moving fibres, therefore, are, in his system, elementary or primary states of most diseases. In explaining the manner in which these states of the solids are produced, he brings into view the functions of the nervous system; and thus gives to pathology a form essentially different from all preceding hypotheses. But to these new doctrines are added, in his system, much of the humoral pathology, and many speculations purely chemical and mechanical.

Leaving the great school at Halle, and its celebrated professors, we come next to the University of Leyden, at the head of which, in the faculty of medicine, is BOERHAAVE. This illustrious physician is now, at the period under notice, in the sixty-fifth year of his age, and has successively filled the chairs of several branches of medicine. He is distinguished as a chemist, botanist, physiologist, and pathologist.

As a pathologist, Boerhaave is an eclectic. In forming his system, he selects what he considers the most valuable from all the preceding systems, instead of adopting any one of them. Some of the materials which enter into his system, he derives from the the doctrines of the Galenists, some from the hypothesis of the mechanicians, and some from that of the chemists. In the introduction to his Institutes he says, "at present physic may be learned without adhering to any particular sect, by rejecting every thing that is offered without demonstration, and by col-

lecting and retaining what has been offered and approved to be real truth, both by the ancients and moderns."

To convey a general idea of the pathological opinions of Boerhaave, it is necessary first to observe, that he supposes that the solids are composed of elementary or earthy particles which are united together by a glutinous matter, and which, when thus united, form minute or simple fibres. Now, these simple fibres, he imagines, possess certain mechanical properties which are affected in disease. Thus, in some disorders they are too lax, and in others too rigid. This difference forms the basis of a division of their diseases into two great classes, viz. 1st. Those of a weak and lax fibre; and, 2dly, those of a stiff and elastic fibre. Having laid down these principles, he proceeds to treat of the disorders of the vessels and viscera; and as these are composed of simple fibres, he, without particularly considering their functions, divides their diseases into those of laxity and rigidity. This doctrine is specious and intelligible. Van Swieten, the pupil of Boerhaave, observes in relation to it, that "the diseases of the fibres being considered, and consequently of the solid parts of the body, so far as they consist of fibres, it appears to how great a simplicity the diseases which occur in all the solid parts of the body may be reduced." After giving his pathology of the solids, Boerhaave enters upon that of the fluids. He first treats of those morbid alterations of the humours which take place in them spontaneously. These he divides into three kinds, 1st, those of an acid; 2dly, those of a glutinous; and, 3dly, those of an alkaline quality. The principal sources to which he traces these spontaneous changes, are the varieties of food, and certain circumstances of the body into which they are received. Having treated of the diseases of the solids and fluids severally, he next considers the phenomena which result from the union of the pathological conditions before described. The force of the circulation is here brought under examination, and this leads to a division of diseases into 1st, those that arise from an excess of the circulatory motion; and, 2dly, those from its defect. His reasoning upon these opposite forms of disease, is, for the most part, mechanical. Connected with his pathology of the vascular system is his doctrine of obstruction which forms an important part of his system. "An obstruction," he says, "is a

stoppage in a canal denying a passage to the liquid, whether vital, sound, or morbid, that ought to pass through it," and among the causes which produce it he enumerates constriction and compression of the vessels, a lentor, visciditv, inspissation, or coagulation of the humours, and an *error loci* of the globules of the blood. Upon these views of the vessels and circulating fluids, he founded his practice of using diluents, attenuants, and deobstruents.

These are the broad outlines of the theory of Boerhaave—a theory so felicitously constructed, so harmonious with the state of the various sciences at the time, and so captivating in its details and illustrations, as to annually draw around its author a multitude of pupils from different and distant countries. The genius, erudition, and auspicious fortunes of Boerhaave, give him a renown which few physicians can ever hope to enjoy. His pupils admire him as a teacher, and the learned deem it an honour to know him; his fame is universal, and every where his character is revered by the great and good.

In the sketch now given of the systems of the three great theorists, Stahl, Hoffmann, and Boerhaave, it will be remarked how slightly they rest upon the only true basis of medical science, experimental physiology, and pathological anatomy. Made up chiefly of assumptions and scholastic reasonings, they afford little evidence of laborious observation, and cautious induction. Still they possess some truths of great value, and which, from their fundamental character, will ever occasion frequent reference to the systems in which they first appeared. But though little attention is given by the systematics in question to the study of morbid anatomy, there are those, contemporary with them, who, laying aside theories and preconceived opinions, pursue it with spirit and success. In this number is the celebrated Morgagni. Indeed, the medical libraries of 1733, are not without works on this subject. Within a little more than half a century, anterior to this time, Bartholini, Bonetus, Valsalva, and Chirac, not to mention others, had gathered from dissections valuable materials for the construction of a just system of pathology. These instances of toil, in a pursuit of all others connected with science the least inviting to most minds, are sufficient to redeem the age from the charge of exclusive indulgence in speculations.

With regard to the modes of practice common at this epoch, there is less diversity than in the prevailing theoretical systems. In fact the therapia of the times is, with all parties, substantially the same. To this remark, however, there is, perhaps, one exception. The Stahlian physicians condemn all active remedies; whilst most other practitioners admit the advantage and frequent necessity of them. The writings of Sydenham, who died in 1689, when Stahl and his rival contemporaries were about commencing their brilliant career, containing many demonstrations of the benefits that result from studying the simple phenomena of disease, and fulfilling the indications they obviously furnish, could not otherwise than influence the practice of all who read them with a view to instruction. Boerhaave speaks of him as the English Hippocrates. Destitute, for the most part, of the subtleties of learning, but rich in facts, and perspicuous in description, the works of Sydenham are, in an eminent degree, practical, and are consulted with a confidence which those of the mere theorist fail to inspire. His treatment of disease is that naturally suggested by a sound judgement acting with competent knowledge; it is, in fact, careful and judicious empiricism, founded on extensive clinical observation. If he is drawn into error by the seductions of theory, he is sure to be reclaimed by the appeals of experience. But the therapeutical improvements of Sydenham are limited to the more common acute diseases. There are many morbid affections, of the nature and seat of which he had not the slightest knowledge; and, for the removal of which, modes of practice are required, that empiricism could never reveal. In the treatment of such cases, he, in common with his contemporaries and immediate successors, resorted to whatever means accident might suggest as probably suited to their relief and cure.

Much of the practice of physicians, in 1733, is of this description; and, in some instances, to a degree that is singularly fanciful and ridiculous. The truth of this remark is shown in their materia medica and officinal preparations. Not content with combining a few medicines that modify the action of one another, and thus more effectually fulfil certain indications of cure, they mingle together a multitude of articles, many of which are altogether inert, or so feeble in quality and inconsiderable in quantity, as to render them trivial in a pharmaceutical com-

pound. The most celebrated instances of this kind are the Mithridatium, or Confectio Damocratis, and the Theriaca Andromachi; the former consisting of forty-five, and the latter of upwards of sixty ingredients. The original formula of these compounds is said to have been found in the cabinet of Mithridates, king of Pontus. It was afterwards reformed by Andromachus, physician to Nero. The Theriaca was held in the highest estimation as a preservative against every species of venom; and, in an age of superstition, when dread of assassination by poison prevailed, it was frequently resorted to, especially by those who moved in the higher circles of society. Though not regarded as possessing the antidotal power ascribed to it at a former period, it is employed by the physicians of the eighteenth century as serviceable in the cure of many diseases.

But more striking illustrations of the therapeutical notions of the day are presented in the catalogue and classification of medicinal agents. Thus, among the *detergents*, are enumerated snails, vipers, white dog's dung, earth-worms, and fox-lungs. Among *absorbents*, are rubies, emeralds, and goat's blood. Among *diurectics*, are hog's lice and hog's dung. Among *diaphoretics*, are unicorn's horn, and bone of a stag's heart. Among the *hysteric remedies*, are elk's hoof, dung of the goose and peacock, and man's skull. Among *ripeners* and *drawers*, are fat of a dog and fat of a man. Among *repellents*, are a dead man's hand, and the royal touch. Numerous other examples might be cited, equally remarkable and disgusting.*

* Huxham, who had risen to eminence in 1733, and whose works possess the practical character and general merit of those of Sydenham, strongly inveighs against the polypharmacy of his contemporaries. "When a physician," he says, "knows whether stimulants or anodynes, relaxants or astringents, attenuants or incrassants, are indicated, he can be at no great loss how to serve himself of proper drugs out of the vast materia medica which we at present abound with. He should select a few of the most effectual for his use, of each sort, and stick to them, and not run into the immense *farrago* which some are so fond of. By so doing, he will soon be acquainted with their virtues and effects, and readily distinguish between the symptoms of the disease, and those caused by the medicines; which is a thing many times of no small importance. I have seen in private practice, and some public writings, such a jumble of things thrown together in one prescription, that it would have puzzled *Apollo* himself to know what it was designed for; not but that there are frequently such complications (and contra-indications too sometimes) in diseases, as makes some degree of combination and contrast in a medicine necessary." — *Essay on Fevers, &c.* — *Preface.*

But to the credit of the physicians of this period it must be said, that they have no faith in the catholicons which the alchemists professed to have discovered, by which life could be extended beyond its natural limits. Of these life-preserving expedients, the most remarkable was the Tincture of Artephius, consisting of human spirits, extracted from a healthy young man, which taken in small doses, from time to time, would protract life beyond a thousand years. Boerhaave, in speaking of this tincture, but without any faith in its alleged power, says, nevertheless, that "it is certain that the strength of a healthy body may, in some measure, be communicated to one that is weak or diseased, since girls lying with old women waste away, whereas the old women improve and have better health and spirits."

Such is a circumspensive review of the state of the world, and particularly of medicine, in 1733. And now, bearing in mind what has been noticed, let us return to our own time. And here, how wonderful is the change! In whatever direction we turn, the scene presents a new aspect; its limits are extended; with a few exceptions, ancient structures have disappeared, or been rebuilt from their foundations, enlarged, and embellished; objects, new, and in great variety, attract from every quarter; and, though impenetrable obscurities bound the view, every thing is disposed in a light that renders the contrast striking and impressive. In accomplishing these changes the human mind, during the last one hundred years, has been in constant and vigorous action. In some countries governments have been overthrown, and civil institutions reformed; in others, the ties of allegiance have been sundered, and free and independent states erected. Inquirers after truth have ceased to venerate speculative authorities, and broken down the idols of the schools. Besides transforming the political condition of nations, and producing numerous discoveries in science, and inventions in art, the revolution of a century has created new objects of ambition, and given new impulses to human enterprise. The particulars, in a survey so extensive, are too numerous to be adverted to at this time. In noticing some of them, we shall select such as are most interesting.

In no branch of knowledge have the changes been more im-

portant and radical than in that of medicine. What now remains of the phlogistic doctrine of Stahl, and his psychological pathology, or of the hypothesis of Hoffmann, and the splendid system of Boerhaave? Resting on, comparatively, a small number of acknowledged facts, their theories now appear like fictions of the imagination founded on a few realities. The age, however, in which their doctrines were received, will ever be regarded with interest. It was the point of time at which speculative medicine reached its height, and began to decline, and at which inductive inquiry commenced a course of rigorous observation, and careful inference.

The chemistry of the present time bears few of the characters of that of 1733. Instead of the confusion of phenomena, and mystical postulates of that day, we have now analyses, generalizations, and formulæ, that give to every part of the science an exactness almost mathematical. Moreover, in description and detail, ambiguity is avoided and precision obtained, by a nomenclature at once beautiful and expressive. Modern chemistry might not unaptly be said to have had its origin at the epoch on which our attention has been turned, since in 1733 was born one of its earliest and most successful cultivators, namely, Dr. Priestley. To the discoveries of this eminent man, and to those of Scheele, Lavoisier, Cavendish, Black, Rutherford, Davy, Berzelius, Dalton, Vauquelin, Bertholet, Gay Lussac, Magendie, Pelletier, and a few others, the science is indebted for the materials that, at present, form its substantial ground-work. Through the powerful agency of the electrical principle, first recognised by Franklin, and brought under control by him, Galvani and Volta, many of the more refractory compounds have yielded up their elements, and disclosed their hitherto recondite properties and relations.

In the departments of anatomy and physiology also, the improvements are numerous and important. Besides perfecting the descriptive anatomy of Cheselden, Winslow, Heister, and their contemporaries, the human structure has been demonstrated in several new points of view. The *anatomy of relation*, or topographical anatomy, forms now an essential part of a surgical education. It exhibits the organs and tissues of the body as they are connected and relatively disposed to one another,

in particular regions of the body. Though at every period in the history of operative surgery some attention must have been given to this mode of studying the human frame, it is chiefly within the last one hundred years, and particularly of late, that it has received the impress of a distinct department of anatomy. Among those to whom surgical anatomy owes its elevation, are found the distinguished names of Desault, Boyer, Roux, Colles, Burns, Hey, Gimbernat, Scarpa, Cooper, and Velpeau.

Another mode, equally modern, of examining the structure of the human body is that known by the title of *General Anatomy*. Under this head, all the elementary textures of the system are investigated and generalized; those being arranged together which are similar in organization and analogous in function. Thus collected and classified, their common characters are examined, and their specific peculiarities, arising from their diversity of situation and connection, particularly determined. This division of anatomy, in its application to physiology and pathology, is of the first importance. It leads to the study of the uses of every tissue of the body separately, and consequently of the part each tissue performs, when acting with others, in producing the various functions of organic life. It displays, too, the structures which are the immediate seats of disease, and exhibits the barriers which, in certain affections, limit the extension of morbid action. The advantages of this mode of unravelling the human body are experienced in every inquiry concerning the nature of diseases. The origin of general anatomy cannot, perhaps, be dated earlier than the time of Borden, whose researches on the cellular tissue, were published in 1767. Subsequently, the inquiries of Dr. Carmichael Smyth contributed to draw attention to the subject. But is it to Bichat the world has decreed perpetual honour for his lucid exposition of the organization, properties, analogies, and relations of the various elementary tissues that make up the body. Led to the study of the organic textures by the striking distinctions, pointed out by Pinel, between the mucous and serous membranes, his happy genius accomplished a work that, in its results, established a new era in the history of medicine. Whatever modifications general anatomy has since received from the labours of Meckel, Gordon, Mascagni, Meyer, Beclard, and others, and how considerable

soever, the changes it may hereafter undergo, it must ever retain the characteristic features given it by the creative hand of Bichat.

But there is yet another branch of anatomy which at present holds a high rank among liberal studies, and of which neither Cheselden nor his contemporaries of 1733, had scarcely any correct knowledge, namely, philosophical anatomy; a department which elucidates the laws that governs the formation of the organs, the causes and varieties of abnormal structure, the operations of moral and physical influences on the human constitution, and the comparative organism of man and the inferior animals.

But though the modern improvements in anatomy are many and important, they are less so than those in physiology. Here, indeed, almost every thing is new. Of the physiological systems of 1733, scarce a vestige remains. It was said, by the celebrated Dr. William Hunter, who died in 1783, that "there never was a man more followed and admired than Dr. Boerhaave. I remember the veneration in which he was held. And now, in the space of forty years his physiology is — it shocks me to think in what a light it appears." The physiological discoveries since the time of Dr. Hunter, far exceed, in number and value, those which had been made within the period he mentions; and consequently, the Boerhaavian system is, at present, deeply overlaid by accumulated truth. The improvements in physiology are too numerous to be even noticed on this occasion. We can but allude to those relating to the functions of the digestive and respiratory organs, and the vascular and nervous systems.

Corresponding with the advances in physiology, are those in pathology. Instead of the hypothesis that diseases are, originally, certain alterations in the condition of the fluids, we have now the doctrine that they are, for the most part, primarily certain affections of the solids. The principles of pathology, therefore, have undergone a fundamental change. We have said that the age of Stahl, Hoffmann, and Boerhaave, will always be regarded with interest. It will be so, for the reason, that a limit was then put to the long and exclusive reign of the humoral pathology, and a commencement made in new modelling the frame of medi-

cal philosophy. The first movement in this great revolution, as we have already hinted, was the bold annunciations of Baglivi, and certain theoretical opinions of Hoffmann. The idea, that diseases originated in the moving fibres, being authoritatively promulgated, especially by the last of these distinguished men, soon attracted general attention; and, eventually, was adopted as a primary fact in pathological science. The downfall of humoralism followed of course, leaving no memorials of its former dominion, but the few solitary truths that had given it a precarious support.

The theory of Stahl, though in a high degree fanciful, obviously favoured, in its leading principle, the revolution in question. By contending that the *anima*, or rational soul, governed the physical movements in health and disease, he drew attention, more particularly than had been done, to the common principle of vitality, the phenomena of which are chiefly manifested in the solids. So far, and without any design on his part, he contributed to the overthrow of the humoral pathology. Hoffmann, too, in supporting his great proposition, that certain diseases primarily consist in a spasm or atony of the moving fibres, evidently had no conception of the turn he was giving to the course of medical inquiries; for, excepting the principles embraced in that proposition, his doctrines are humoral and mechanical. It is a fact sufficiently singular to be stated, that Boerhaave, whose theoretical system transcended in popularity every other, furnished nothing original promotive of the advancement of medicine, whilst Stahl and Hoffmann wrought up into their hypotheses, elements, which though crude and unshapen, were destined to explode the errors with which they were connected, and become, under improved forms, the basis on which medicine was afterwards to rest.

The transition from humoralism to solidism being thus commenced, was rapidly carried forward by their immediate successors. Among the abler and more distinguished of these, were Haller and Cullen, both of whom in 1733, were just entering the profession, the former being, at that time, twenty-four and the latter twenty-one years of age. Haller was the pupil of Boerhaave; but abandoned the system of his preceptor, and engaged as early as 1739, in a course of inquiries into the nature and

laws of irritability and sensibility. The result of his inquiries were so original and satisfactory, that the humoral theories lost their attractions, and ceased, in a measure, to exert their former authority. At the same time Cullen, being appointed to the chair of medicine in the rising school of Edinburgh, and adopting, with certain alterations and additions, the leading principles of Hoffmann with respect to the spasmodic and atonic affections of the moving fibres, entirely subverted, in a few years, the pathology of the fluids, and established that of the solids. But though solidism is every where received as the true basis of pathology, the medical philosophy of the present day does not exempt the fluids from disease. It regards them as often affected secondarily to the solids, and, perhaps, sometimes primarily. It contemplates the human body as a unit, the organic apparatus elaborating and distributing the fluids, and the fluids influencing and modifying the solids. It views the nervous, vascular, and secretory organs as the parts in which the vital principle is primarily and especially operative in preserving health; and hence it refers the origin of disease to functional derangements occurring in those parts.

Now, if to these changes in chemistry, anatomy, physiology, and the general doctrines of pathology, be added the immense stores of facts accumulated, within a few years, from *post mortem* examinations, demonstrative of the precise seat and anatomical characters of disease, the present state of medicine will appear in forcible contrast with that a century ago. Comparatively, every thing is now settled upon a permanent physiological basis. The history, symptomatology, etiology, and diagnosis of most disorders are, in a high degree, full and precise; and their treatment, aided, in many instances, by new and powerful agents, greatly improved. Moreover, in the progress of medical discovery, many specific diseases have been disarmed of their terrors, while others, for the most part, are banished, or limited in their prevalence.

Surgery has detached itself from its former degraded association, and by many and signal achievements, raised itself to the rank of medicine. The medical character among the well educated, no longer imposes by a grave demeanour, aristocratic habiliments, and show of learning; but is cheerful, frank, un-

distinguishable in attire from the rest of the world, and intelligible in communication.

There are now no Stahls, or Hoffmanns, or Boerhaaves, whose doctrines give character to the age. No hypothetical systems, deserving of notice, that divide physicians into parties, and challenge their adhesion and support. Medical fame is distributed among a multitude scattered in every enlightened country. Such are the divisions of medical pursuits, that eminence founded on merit, is widely equalized, through the attainment by many to the same degree of excellence in the different departments of study and practice. In no individual are found combined the qualities that distinguish the cultivators of the several branches of medicine. If a few, here and there, rise above others, by reason of superior industry or superior talent, their greater elevation is so inconsiderable as to be scarcely discerned above the line that forms the high but extended level of professional eminence.

Medical knowledge is too widely diffused to allow any medical school, however able its faculty, to exert a controlling influence over the medical world. Compared with its state a century ago, medicine is now a republic; and such it must remain, so long as the *a posteriori* method of research is pursued with zeal, as it has been of late, in various countries. Everywhere practical studies have taken the place of theoretical speculations; instruction is sought in hospitals, dispensaries, almshouses, lazarettos, prisons, and the private chambers of the sick; pestilence is fearlessly encountered, and its phenomena and ravages calmly observed: the dead of all diseases, are carefully and minutely dissected; and though the field of inquiry is yet boundless and inviting, the three kingdoms of nature have been widely explored, their productions analyzed, and many of them applied to the great ends of all medical science, the prevention and cure of diseases, and the physical happiness of mankind. Finally, the knowledge derived from these sources in different countries, is carefully gathered up, and periodically circulated by the press; and thus a regular interchange of medical intelligence is established throughout the earth.

ART. II. *Practical Observations on Chorea Sancti Viti.* By DAVID M. REESE, A.M., M.D., Professor of the Theory and Practice of Physic and Clinical Medicine, in the Albany Medical College.

THE form of disease, vulgarly known as St. Vitus's dance, is not only more prevalent than formerly, but becoming increasingly frequent, as every practitioner must have observed. And, although often confounded or complicated with epilepsy, hysteria, catalepsy, and some forms of paralysis, yet is most generally susceptible of accurate diagnosis, notwithstanding the dissimilarity and even contrariety of symptoms in different examples. It is to this latter circumstance that we are to ascribe the very defective definitions found in nosological writers, no one of whom has been able to include all the variety of phases it assumes, nor even give us any one symptom which is uniform or pathognomonic.

Dr. Sydenham, Dr. Hamilton, and Dr. John Mason Good, have perhaps, collectively, given us the best description of the disease to be found in the books, yet in many well characterized cases, chorea assumes a form not fitly represented by either of them. Indeed, from the variety of cases which have come under my notice, essentially differing from each other in their symptomatology, I am inclined to the opinion that a true portraiture of this malady, exhibiting signs which are uniformly present is impracticable, because of its anomalous and endless varieties. We must therefore content ourselves with the definitions which are found in the books, premising however, that they only furnish us with the most frequent and prominent features of chorea, and preparing ourselves to discover in practice, innumerable other peculiarities alike surprising and unaccountable.

The first and most general symptom is that of a limping in the gait, occasioned by dragging one foot, usually the left, after the other. This symptom is soon followed by an involuntary motion of one or both arms, afterwards extending to the lower extremities and the muscles of the face and neck, exhibiting in the countenance ludicrous and often hideous grimace, and accompanied with grotesque motions of the head, and even of the

entire body. These involuntary contractions of the muscles affected are sometimes periodical, but by no means universally so, for they sometimes continue for months incessantly except during sleep, and in severe cases, they are manifested, to some extent, in sleep itself. In other examples, they only occur on an attempt at volition, when the patient makes an effort to speak or to move, when the control of the muscles by the will appears to be lost; and in such cases, the patient has a temporary respite from all the symptoms by quiescence of mind and body, when this is attainable.

Notwithstanding these and other symptoms, occasionally greatly aggravated, *no pain or uneasiness* is felt by the patient in the general. The exceptions to this rule are rare, and when they do occur, there may be discovered some complication of disease, organic or functional, which may or may not participate in its causation, and is often distinct and unconnected with chorea, this latter being curable while the former remains, and *vice versa*.

Vigorous constitutions, and the torpor of old age, are the only known exemptions from this malady, which attacks the feeble and delicate of either sex, and though most frequent between the ages of eight and sixteen years, yet young children and even infants are occasionally visited, and I have often treated well marked cases in adult years. It is true that girls suffer from it oftener than boys at the approach of puberty, which may depend on their delicate conformation or effeminate habits, or perhaps, their greater liability results from the retention of catamenia, when the uterine organs are either early or late in their developement. This latter hypothesis receives confirmation from the fact that the disease terminates immediately on full menstruation, and has been known to resist all treatment until this period.

In the early stages of this disease, the gesticulations of the patient, and even the distortions of the features, are accompanied with remarkable contentment and good humour, and the absence of pain or other uneasiness, often enables the patient to laugh at his own disability and eccentricities. As the disease advances however, and deglutition, as well as articulation become impeded and often suspended, the face becomes pallid and the general health is overthrown. Now the mind is impaired in its

functions, a languor and vacuity of countenance follows, often attended with deep melancholy, and in some cases fatuity and even idiocy comes on, the faculties retrograding to those of infancy.

In many examples the patient is not only unable to walk or stand, but cannot even sit in a chair, by reason of the convulsive jerking of the limbs, so that lying on the bed or the floor is the position sought. In other examples, however, the patient can sit with comparative quiet, but on rising from the chair, or attempting to walk, a rotary motion of the body comes on, by which the patient turns round upon the toes with incredible rapidity like a top; or is obliged to run round swiftly in a circle to keep from falling. I have seen cases in which this *rotary* motion of the arms and legs, one limb at a time, accompanied by a violent shaking of the head, would come on periodically, and could not be restrained by any amount of force, for if the limb in motion was held, the whole body would become convulsed.

In other instances, the patient has an irresistible propensity to dance whenever placed in an erect position, and will keep time to music, which seems to afford great delight, insomuch, that cases are recorded of the malady being cured by instrumental music. Very often, however, this dancing form of chorea is accompanied by violent shaking of the body and limbs without any regularity, and often continuing for hours together, until the system is exhausted and the patient falls.

The several communities of Shakers, whose form of worship consists in dancing, have among them numerous cases of well marked chorea. For though all the members participate in the exercise of shaking and dancing after their manner, and many of them are in perfect health and have remarkable self-possession, yet a medical observer can readily distinguish the individuals who suffer under this disease, by very obvious diagnostics. And it is worthy of remark, that in every Shaker village, the number of cases of genuine chorea are increasing, by reason of sympathy and that propensity to imitation which belongs to human nature, and which has given to this malady a semblance of being contagious. Indeed, numerous instances are on record of this disease being communicated by the force of example, the propensity of imitation, or a species of moral sym-

pathy ; as in nunneries, boarding schools, and assemblies of religious fanatics. I have often witnessed similar instances of the propagation of this disease in families, among sisters and brothers, and even extending to the children of the neighbourhood. It is probable that these results have sometimes followed the attempt of one child to imitate the motions of another suffering from chorea, by mockery so often repeated, that the habit is acquired and becomes uncontrollable. It is for this reason that the separation of the patients from other children ought always to be insisted on, and their entire seclusion greatly promotes recovery.

This disease may be strictly idiopathic or symptomatic. It may come on suddenly or gradually, but in either case it may or may not be idiopathic, so that this circumstance singly will not decide this point. Where it occurs consequentially upon intermittent or remittent fevers, as is not unfrequent, it may be safely regarded as symptomatic. But when idiopathic, it may be accompanied or preceded by signs of impaired health, disturbed digestion, constipation, worms and other intestinal irritation. These, however, are often the effects of the disease, and in no sense its cause. Nor is the prevalent pathological opinion, that the seat of morbid action in chorea is in the stomach and bowels, at all fortified by the curative results of purgation. The depletory and counter-irritating effects of cathartics may, in many cases, cure the disease, and yet its seat be remote from the intestinal tube, as is known to be true in many other diseases. The same answer may be given to the argument founded upon the character of the dejections; nor is any error more frequent or mischievous in pathology and therapeutics than that of confounding effects with causes.

The predisposition to chorea is, in most cases, constitutional, and in some instances, it would seem to be hereditary. It is found to exist in persons of nervous temperament, or a morbidly excitable state of the sensorium, and is greatest at those periods of life in which the nervous system is most irritable. In such persons, certain states of the atmosphere would seem to increase the predisposition, and hence its greater prevalence at particular times and places may be accounted for, as recorded by Cullen and the older writers.

Its exciting causes are numerous, but they are most frequently

mental emotions, as fright, anger, religious fanaticism, disappointed love, &c., and when produced by physical causes of any kind, they will be found to be those which are peculiarly operative upon the brain and nervous system. Such are puberty anticipated or delayed; inflammation or irritation of the genitals from any cause; suppressed discharges or eruptions; vegetable and mineral poisons, pregnancy, especially occurring in unmarried females after criminal indulgence, and accompanied by remorse of conscience, dread of exposure, and fruitless lamentations. I have known several examples of the latter character.

That intestinal irritation may sometimes be an exciting cause there can be no doubt, especially when long continued, as in cases of tape-worm; but such examples are rare, and not, as set down in the books, frequent or common causes. The irritation from wounds has excited chorea, but never unless they were near the brain, spine, or some important nerve. And when irritation of any other kind, gastric or intestinal, has become a cause, it must have been so long continued as to have seriously affected the sensorium. For as Dr. Macintosh justly observes, "the opinion broached by Dr. Hamilton, that chorea depends on a collection of feculent matter in the bowels, is so decidedly erroneous, that I need not say a word upon the subject." The pathology of this disease has not been accurately ascertained, and perhaps never will be definitively settled, because its rare fatality affords so few opportunities for *post-mortem* inquiries. It has been known to continue with paroxysmal visitations of greater or less violence from youth to adolescence, and even to senility itself, without destroying life.

But there are many powerful reasons other than those which are analogical, which point to the sensorium as the immediate seat of the irritation upon which this disease depends. Such are its arising so often from mental causes, particularly an excited imagination; the effects produced upon the mental faculties, often early in its progress, and almost always in protracted cases, terminating in idiocy and insanity; the almost universal absence of spasmodic action during sleep, as well as the fact that the involuntary muscles are seldom, if at all, involved. It is true that this cerebral irritation may be secondary in many cases, and its primary source may be located in some remote

part of the body, possibly, as in the examples of *tœnia* and other verminose affections, in the intestinal canal; but even in these the disease is not developed until the irritation is manifested in some portion of the sensorium commune.

Various opinions have been broached in relation to the precise tissue morbidly affected in chorea. Some place it in the cerebral hemispheres, where Magendie supposes the *will* resides. Others ascribe the irritation to the cerebellum, the spinal cord, the tubercula quadragemina, and some to the ganglionic nerves, particularly the abdominal plexus. All these hypotheses, however, and the arguments by which they are sustained, go to confirm the cerebral pathology of the disease, which is certainly plausible from the considerations before named.

It is fortunately of little practical importance, to decide definitely in what part of the cerebral tissue the irritation is located, since it would not essentially modify the therapeutic indications. It is most probable, that the essence of the disease consists of a *mobility of the nervous system*, by which the control of the voluntary muscles is lost; although some have supposed that a morbid action of the faculty of volition best explains the phenomena. Either of these opinions, however, will lead to the same result, and attribute the symptoms to an irregular excitement of some portion of the cerebral mass. That such is the case, in most examples, there is scarcely room to doubt.

These observations being premised, we are prepared to inquire into the indications of treatment, and the best means of their fulfilment. And if the pathological view we have taken be correct, the medical management of the disease need not be difficult or complicated. Indeed, this view is necessary to be taken, in order to account for the endless variety of treatment which has proved efficacious in different hands, and to reconcile the strangely conflicting testimony of medical writers on the subject.

Sydenham recommended alternate bleeding and purging in all cases, and this more indiscriminately than he was wont to do in any other disease. He seems to have succeeded in the cases thus treated, possibly because they were characterized by general plethora, or local congestion, which was the source of

irritation. Later writers condemn and reprobate this practice, although Dr. Hamilton, under the influence of his hobby, or more properly his mania for purgation, contends for cathartic treatment chiefly, though even he condemns bleeding; while Dr. Cullen, adopting the opposite theory, which ascribes the irritation and mobility of the nervous system to debility, with all similar pathologists use exclusively and indiscriminately stimulant and tonic treatment. Hence, the books abound with the conflicting speculations of these several theorists, and the purgative and the tonic systems are each supported by the rival sects with numerous cases and cures.

Practical men, however, in this, as in other cases, are governed in their plan of treatment by the pathological condition in every given case, irrespective of all nosological system makers. And all such repudiate the indiscriminate reliance upon any one class of remedies in chorea, but conform the treatment to the varying causes, extent, and seat of the irritation, as well as to the temperament and condition of the patient.

There are rare examples, in which chorea assails plethoric persons, or arises from a congestive condition of some portion of the cerebral or nervous tissue, approaching to local hypertrophy, in which bleeding may be indicated, and purgation premised, with safety and advantage, especially in its forming state. In later periods, however, either of these agencies would be injudicious and disastrous. And it is worthy of remark that, theory apart, Sydenham found it needful to alternate opium with his depletory remedies, and Hamilton while clamoring for the exclusive potency of purgatives, was careful to counteract the debility he produced; and hence most inconsistently accompanied his continued depletion with daily cathartics, by recommending tonic medicines and a strengthening regimen, including a liberal diet, regular exercise, and even the cold bath, which latter he describes as acting, in many cases, like a charm. Indeed, it will be difficult to find, in the multitude of cases reported by all the depleting pathologists who have written upon chorea, a single instance of cure without stimulating, tonic, and antispasmodic treatment being superadded to their evacuating agents; while those who rely solely upon the latter plan, without any form of depletion, are very frequently successful in radical and permanent cures.

But it is alike unphilosophical and absurd to imagine, that the ever-varying forms which this disease assumes, admit of the universal and indiscriminate application of any one remedy or specific ; or that every case may be successfully treated by any one uniform plan. The age, sex, temperament, predisposing and exciting causes, period of the disease, local seat of the irritation by which it is kept up, as well as the previous medication to which the patient has been subjected, the state of arterial action, its periodicity, and other modifying circumstances, must all be regarded in selecting the plan of treatment, or the individual remedy which is to be preferred. In view, however, of all these considerations it will be found that, in a very large majority of cases, no depleting treatment is admissible, as proved by the aggravation of symptoms which follow any kind or degree of artificial evacuation. The only exceptions to this rule I have ever seen, are those in which some gastric irritation exists simultaneously with chorea, for the removal of which, a single cathartic, or, what is better, an emetic, has been called for. With this exception, the tonic plan of treatment should be adopted from the beginning, unless contra-indicated by some one of the modifying circumstances before mentioned. If, for example, the sexual developement be delayed, as in young females, leeches to the vulva or anus, a blister to the sacrum, the pediluvium, or an aloetic preparation may be premised, irrespective of the existing chorea, but even then tonics will afterwards be necessary, notwithstanding the relief obtained by the success of such remedies.

But enough has been said to protect the tonic plan contended for from the charge of being empirical, and it will now be in place to notice the claims of individual remedies of this class, which are adapted to the treatment of chorea. This is the more necessary, since there is scarcely a single vegetable or mineral tonic which has not acquired an adventitious reputation at some time or place, if medical writers are to be believed. The disciples of the Cullenian school still rely upon cinchona and its preparations, of which quinine is generally preferred ; while most other practitioners employ the preparations of iron or zinc, choosing the various metallic, instead of the vegetable tonics. I have, however, very often seen them all foiled, though diligently employed and a judicious regimen superadded. And still

oftener, I have known the disease to recur after a short interval, having only been suspended for a season by these remedial agents. These results of experience have led me successively to test the comparative merits of various other remedies which have been reported as successful, as the rubigo ferri, cuprum ammoniacum, sulphate and flowers of zinc, oxide of bismuth, camphor, electricity, nitrate of silver, &c., and after very considerable opportunities, I have learned to rely upon the tonic powers of *arsenic* in preference to any and all other medicines of this class, and have never known it to fail in effecting a radical and permanent cure. I feel great confidence in recommending it to the profession in all those cases in which the tonic plan is decided upon, either with or without preliminary medication. The arseniate of potash, as existing in the formula of Fowler's solution, is the preferable mode of exhibition, and its dose should be graduated according to the ability of the stomach to receive it without nausea. In the most numerous subjects, varying from seven to sixteen years of age, six or eight drops should be given night and morning, gradually increasing its dose and frequency. Adults may take ten drops increasing to fifteen, and even twenty, three times a day, and in all cases it should be persevered in for a week or more after all the spasmodic symptoms have disappeared. The only unpleasant effects are nausea or vomiting if the dose be too large, and occasionally a tumefaction of the head and face if too long persisted in. On either of these effects being produced the medicine should be discontinued for a few days, and then resumed in a diminished dose.

With these precautions, I have, for a number of years, employed this remedy in over two hundred cases of chorea, without ever having witnessed any of the untoward results upon the constitution, said to follow the exhibition of arsenical preparations. So far from any of the sequelæ, which are apprehended by the alarmists, my patients have, under its use, not only recovered from chorea, but many of them seem to have since acquired vigorous constitutions and improved health. I have used it in infancy, in delicate females during pregnancy, and under circumstances supposed to forbid its employment by many, and I have never once seen cause to regret its exhibition.

But while I thus dwell upon the value of arsenic as a remedial agent in chorea, I have not failed to superadd auxiliary treatment, and hence nutritious diet, active exercise, cordial drinks, and the cold bath, both plunging and showering, have all been usefully employed. And, in the examples, comparatively few, in which counter-irritation has been indicated, I have obtained most favourable results by the aid of rubefacients, blisters, setons, issues, and the eruption of the tartrite of antimony, applied to the spine. But I have never had occasion for active depletion even by purgatives, although when constipation exists in connection with chorea, or where there has been present the suspicion of worms, I have interposed a cathartic or anthelmintic, while, at the same time, persevering in the tonic treatment.

The numerous authorities for the value of arsenic in the treatment of chorea, which may be found among the records of modern practice would seem to render it plausible to suppose that its success does not depend exclusively upon its tonic powers, as these powers exist in other remedies to an equal, if not greater, degree, while, nevertheless, they do not, in this disease, possess equal merit. Hence Dr. Gregory and others maintain that arsenic acts by producing a strong impression upon the nervous system, other than simply a tonic effect, and he refers for illustration to the fact, that intermittents and other paroxysmal diseases, with and without periodicity, are thus arrested. And this view is corroborated from the fact that the nearer arsenic can be given to the expected paroxysm, the more certain is the effect.

How far this explanation may satisfy the curious in such matters I know not, but the potency of arsenic in interrupting those diseases which seem to be kept up by a principle of *habit*, has been long known, and that this is the case in many examples of chorea, has been already stated, and such is also the fact with many other spasmodic diseases, as asthma, whooping-cough, &c., some of which, like chorea, are occasionally propagated by a contagious sympathy, supposed to be a compound of pity and that instinctive proneness to imitation, which pervades all the higher orders of animated nature. In such examples, it seems highly probable that the *modus operandi* of arsenic is to

be explained by the strong nervous impression it makes upon the system, which interrupts that chain of actions in the body, which have been long associated with convulsive movements of the limbs. These movements may be, at first, the result of some circumscribed irritation in a portion of the sensorium, but afterwards kept up by the power of habit. Nor is this explanation more mystical or unphilosophical than that given of other alteratives, about which the profession are wont to discourse so learnedly.

In a future paper, I purpose to furnish the readers of this Journal with a faithful description of a number of cases, selected from my note-book, in confirmation of the pathological and therapeutical doctrines of the present, some of which will be found unique and interesting, alike to the student and practitioner.

ART. III. *Practical Cases of Ovarian Disease.* By G. S.

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Case I. On 2d of June, 1837, I was requested to visit Mrs. B. ætat 29 years, from whom I heard the following particulars: She had been married nine months and a-half. Previous to her marriage she had always enjoyed good health, and her "monthly courses" had observed a marked regularity. About six weeks prior to marriage, she *thought* she observed a very slight swelling in the iliac region; it produced no uneasiness, but actuated, no doubt, by a proper feeling of delicacy, Mrs. B. consulted a physician to know whether, under the circumstances, it would be proper for her to marry. She was assured that the swelling would amount to nothing, and therefore, felt no further anxiety in regard to it. Her "courses" never returned after marriage, and the various presumptive and probable symptoms of pregnancy soon manifested themselves. With the exception of frequent indisposition to sleep at night, and torpid bowels, nothing remarkable occurred until about eight and a half months after her marriage. At this period, the pain in her back was at times ex-

cessively severe, and the abdominal enlargement had increased so rapidly, that she found it necessary to seek medical advice. A surgeon was accordingly sent for, and, after reflecting on her case for some days, told the husband of Mrs. B., that, if his wife would consent, he would remove the tumour. To this proposition, she, in common with her husband and friends, objected. Another medical gentleman was then requested to meet the first in consultation. Nothing, so far as I could learn, of professional interest, was agreed on by them. The husband, naturally anxious to know the precise condition of his wife, called on these gentlemen and requested them to say whether they considered her pregnant. They declined giving an opinion, and said they would prefer waiting, as a few days would decide the nature of the case. Dissatisfied at not receiving more encouragement than was embodied in the above conversation, the gentlemen were told that their services were no longer required.

This is the purport of what transpired previous to my seeing the case, and the facts are stated as taken down by me at the time from the lips of Mrs. B., in the presence of Dr. Washington.

On visiting the patient, I found her excessively enlarged, and labouring under very acute distress; the integuments on the abdomen appeared ready to burst; she was feverish, and much troubled with constipation; her respiratory and digestive organs suffered greatly from pressure, and her general appearance of emaciation evidenced much internal trouble.

For the last two weeks Mrs. B. had been compelled, such was her distress, to leave her bed frequently during the night and walk the room. After a very rigid investigation, by way of question and answer, as to the history of the case, I was unable to elicit any facts other than those which have already been mentioned. Mrs. B. being then arranged in bed on her back, with the thighs flexed on the pelvis, I made an abdominal examination of the tumour; it was very evident that the enlargement was wanting in uniformity, and it assumed somewhat a diagonal position as regarded the abdomen. There was no pain when the tumour was pressed upon; and, in percussing the abdomen, a very distinct fluctuation was perceptible. It was plain that this was not a case of ascites, for the fluctuation, though tolerably diffused from the great size of the tumour, was

certainly circumscribed. And ascites, we know, at least in a great majority of cases, is preceded by such symptoms of disease, as will at once enable the careful practitioner to detect the malady. From the previous history, therefore, of the case, together with the symptoms present, I had no hesitation in concluding that the patient laboured under ovarian dropsy. An examination, *per vaginam*, was next made, and it was discovered that the womb was enlarged. There was nothing remarkable about the cervix uteri — no pain on pressure, and its structure appeared perfectly natural, nor was there the slightest vaginal discharge. The finger being introduced into the rectum, the posterior surface of the womb evinced a decided development of this viscus, and this latter examination fortified me in opinion as to the probable amount of uterine enlargement. The question now to be decided was an exceedingly important one. Did the enlargement of the womb depend on pregnancy, or was it the result of disease, or might it be owing to the presence of something in its cavity other than a fœtus?

That it was not disease, the perfect absence of pain, and of all the symptoms ordinarily attending a morbid condition of this viscus, seemed clearly to demonstrate. The patient was fully under the impression that she was pregnant, and had, together with her female friends, attributed all her distress to this condition. She, however, had never felt the motion of the fœtus. It will thus be seen, that I had arrived at a portion only of my diagnosis, and the duty devolved on me to endeavour to account for the enlargement of the womb. Accordingly I resorted, as the only means now left, to auscultation. I made repeated attempts, simply with my ear applied to the abdomen, to detect the pulsations of the fœtal heart, or the "*bruit placentaire*." I did not succeed. On the following day, I requested my friend Dr. Washington to visit the patient with me. She was again examined with great care, and repeated attempts were made, both with the ear and stethoscope, but without success. Under all the circumstances of the case we felt ourselves justified in giving the following opinion, which was stated to the patient and her friends; viz., that Mrs. B. laboured under ovarian dropsy, complicated most probably with early pregnancy. The distension of the abdomen was now so great, and the distress from

injurious pressure so marked, that it became my duty to urge on Mrs. B., as a means of temporary relief, the necessity of being tapped. The suggestion was not assented to, and palliatives were directed—keeping the bowels in a relaxed state, and ordering such articles of diet as are most easy of digestion. Morphine procured her comparative rest at night. She continued in this state until 15th of July, when I operated on her in the presence of Dr. Washington, Professor Alban Gold-Smith, Drs. Caldwell and Hibbard. One gallon and a half of amber-coloured fluid, of the consistence of melted calf's foot jelly, were drawn off. She experienced such immediate relief as to elicit the expression that "she felt as if she was in heaven." On the following day, Dr. Washington and myself again had recourse to the stethoscope, and the pulsations of the fœtal heart were distinctly heard. This was most gratifying, so far as it confirmed the diagnosis. It is highly probable that the great size of the tumour had materially interfered with our arriving at this result earlier. On 20th of July, Mrs. B. quickened. From the period of the operation until the following October, Mrs. B. enjoyed comparatively excellent health, her digestion was much improved, and she gained in flesh. On 14th of October, however, it again became necessary to draw off the accumulated fluid. One gallon was taken away; in two days afterwards the distension was much increased, and on 19th of October half a gallon of fluid was drawn off. It is worthy of remark that, in performing this last operation, not more than an ounce of fluid passed through the canula; a probe was introduced to remove the obstruction, but none was found to exist. It was, however, very evident that there was yet a great quantity of fluid in the ovarium, and the distress of the patient obviously indicated the removal of at least a portion of it. The trochar was, therefore, introduced into another part of the tumour, when not more than two ounces of fluid passed away. The instrument was then withdrawn, and, on looking attentively at the ovarium, a pouting was observed at its upper portion, immediately under the last rib. The trochar being introduced at this point, sufficient fluid escaped to make the patient quite comfortable. The cause of the difficulty was owing to the fluid being enclosed in numerous cysts, each distinct in itself; and it seems to me that a useful lesson

can be derived from the recollection of this fact. For example, in hydatid dropsy of the ovarium, *post-mortem* examinations reveal to us that the various cysts or compartments vary in size, some containing a gallon or more, whilst others are so small as not to yield, when punctured, an ounce of fluid. Now let us suppose our opinion to be formed as to the existence of ovarian dropsy in any given case, and, in the event of an operation, if, in puncturing one of the small cysts, not more than a large spoonful of liquid escaped, we might at first suppose that we had failed in our diagnosis. The bare mention of the fact will, I apprehend, be sufficient to put practitioners on their guard against the possibility of such an error, involving, as it certainly would, their professional reputation, if indeed it did not compromise the safety of the patient.

After the last tapping, Mrs. B. passed on with more or less distress to the period of her confinement, which took place on the 29th of October. She was in labour only two hours, and was delivered of a still-born, unnatural and sickly-looking infant. The placenta followed almost immediately the expulsion of the fœtus, and the uterus was well contracted. In two hours after this birth of the child, the ovarium commenced enlarging, and, in thirty-six hours after delivery, this poor woman breathed her last, the abdomen being almost ready to burst from the gaseous distension of the intestines. The husband and friends had been fully admonished of the almost certain result of the case, soon after we had first visited the patient.

In the *post-mortem* examination, in which I was kindly assisted by Dr. Caldwell, the uterus was found to be perfectly healthy, the left ovarium was immensely large, and filled with a number of hydatid cysts. The right ovarium preserved its natural character in every respect. The preparation is now in my museum.

Case II.—On the 6th of June, 1838, I was requested by two of my pupils, Messrs. Millet and Steane, to visit Mrs. L. ætat 31 years. Mrs. L. had been married about six months. Her general health seemed much broken, and her constitution had, at no time, been vigorous. She was born in Bath, England, and had for a long time, at different intervals, been under the care of an eminent physician at that place. When I first saw Mrs. L., I found her in an exceedingly debilitated state, in consequence of a large

quantity of blood, which had passed during the four days previous from her womb. On questioning her as to her situation, she remarked, that she considered herself about three months pregnant, and had for the thirty-six hours preceding my visit, suffered much occasional pain in the region of the uterus. In placing my hand on the abdomen, I easily recognised the fundus of the womb about two inches above the upper strait of the pelvis; and to the right of the womb there was a tumour about the size of a large double fist, exquisitely painful on pressure. Mrs. L. being asked whether her attention had ever been drawn to the tumour, observed carelessly, "Oh! doctor, that is an old affair." It appears that she had been afflicted with this enlargement for six years, but it did not seem to increase in size, *nor had she ever felt the slightest pain in it until about four months after her marriage.* In making an examination *per vaginam*, I discovered a fleshy body protruding about two inches out of the mouth of the womb; and on introducing my index finger very cautiously between the projecting body and internal surface of the cervix uteri, I succeeded, by very gentle titillation, in bringing on uterine contraction, which, in a few moments, resulted in the expulsion of an anomalous looking mass, measuring seven inches in length, by two in breadth. As soon as this was expelled, the uterus contracted, and the flooding ceased. Arrow root was ordered for Mrs. L., and in the evening the following mixture was given, which procured her a comfortable rest during the night:

R̄ Syrup papav.	3ij
Mucil, acaciæ	3ij
Sol. sulph. morph.	gutt x
Ft. mixt.	

On visiting my patient in the morning, I found her much refreshed by her sleep, and in directing my attention to the tumour, the pain was as acute as on the day previous. There was also slight febrile excitement. One dozen of leeches were ordered to be applied to the tumour, and the bowels were kept properly relaxed by the following medicine:

R̄ Infus. sennæ	3ij
Sulphat. magnesiae	3ij
Mannæ	3i
Tinct. jalap,	3i
Ft. haustus, repet. pro re nata.	

The local bleeding was speedily followed by a sensible diminution in the pain, and the volume of the tumour was evidently lessened. It became necessary in the course of the month to have thirty-six leeches applied, including the first dozen, and this, together with mild aperients and simple diet, removed entirely all sensibility on pressure; and, in two months from the time I first saw her, the tumour was considerably diminished in size. In August, 1839, I accidentally met Mrs. L. at Saratoga Springs, where she was occupied in keeping store. She told me she had suffered no inconvenience from the enlargement, and that it appeared gradually to lessen in volume. I have since heard nothing of the progress of her case, though, I feel assured, if any recurrence of her former symptoms had taken place, I should have been advised on the subject.

Mrs. L., on being questioned particularly as to the symptoms which presented themselves at the time the tumour was first observed, stated, that for two or three months previously, she had suffered much from a deep-seated pain in the right iliac region, with a feeling of numbness in the corresponding limb. But was particular in repeating that after the tumour was sufficiently developed to become recognised, it ceased to give her the slightest physical uneasiness.

I should have mentioned, that Mrs. L. menstruated with ordinary regularity, and had no intermission in this function, with the exception of the period she supposed herself to be pregnant.

Case III.—In the month of June, 1837, Dr. A. S. Ball called on me to request that I would see Mrs. J., in consultation with him. This lady had been in declining health for three years; and having received no benefit in her native state, New-Jersey, came to this city at the recommendation of friends, to place herself under the care of Dr. Ball. Mrs. J. was thirty-six years of age, of a scrofulous habit, and much prostrated from the effects of disease. She was the mother of four children, the youngest being at that time three years old. This child, Mrs. J. nursed at the breast for fourteen months. A few weeks after the birth of the child, the patient complained of partial inability to walk; and in the left iliac region, the pain was so severe as to require the constant attendance of her physician. The inguinal glands on both sides were considerably engorged. Leeches and fomen-

tations were ordered, but she was left so debilitated as to disqualify her entirely from attending to her domestic duties, and she was obliged to keep her bed, with occasional intermissions, for nearly six months, all the time nursing her infant. About two months after weaning her child, she began to enlarge in the lower portion of her abdomen, and this gradually increased to such an extent, as to render life a burden to her, and it was in the hope of deriving some benefit from medical counsel in New-York, that she undertook to visit this city, and place herself under the direction of Dr. Ball.

Mrs. J. had not menstruated since the birth of her last child. The preceding is the account given by the patient of her case to Dr. Ball and myself.

At the request of the doctor, I proceeded to examine the patient. She was placed in bed, on her back, the thighs flexed on the pelvis. The abdomen was considerably distended, and the patient, in the recumbent posture, experienced great difficulty in breathing. There was a well marked tumour of immense size, originating, apparently, from the left side of the abdomen, and extending as high up as the last rib, stretching considerably on the right side, in proportion as it ascended. On pressure, the patient did not complain of pain — and in percussing the tumour the fluctuation was very distinct. A small portion of the right iliac region was not at all intruded upon by the tumour, and in examining particularly this part of the abdomen, we again detected fluctuation. Just below the umbilicus there was easily recognised by the hand a lump about the size of a small apple — it was very hard, and quite moveable to a certain extent, and appeared to be pediculated at its attachment. On pressure it was altogether insensible. In the vaginal examination, the os uteri was perfectly natural and free from disease, but the womb itself was somewhat enlarged.

The large tumour on the left side, what was it? We gave it as our opinion that it was dropsy of the left ovary. In what way could the fluctuation be accounted for in the right iliac region, not at all occupied by the tumour? Might it not be that the ovarian enlargement was complicated with ascites? Such was the opinion we entertained. What was the nature of the small lump below the umbilicus? Might it not be a fibrous

tumour attached to the outer portion of the womb? Its hardness, its mobility, its freedom from pain, and its pediculated character, all warranted this conclusion.

Under all the circumstances, what course was to be pursued in reference to this woman's situation? She was excessively emaciated — the whole stamina of her constitution had long since been destroyed — and, anxious as she was to be relieved, I did not feel myself justified in advising any thing but simple palliative medicines. In this view Dr. Ball concurred. I saw nothing more of the patient for several days, when I was called upon by Dr. Ball and the husband, the latter being most urgent that something should be attempted to rescue his wife from her inevitable fate. The danger of an operation in her debilitated condition, and the extensive disorganization which had taken place, were fully set forth, and, on these grounds, we declined doing any thing more than has been stated. However, the husband was frankly told that his wife should have the advantage of additional counsel, and with the consent of Dr. Ball, I invited Dr. Washington and Dr. Alban Gold-Smith to see the case with us. The united opinion was, that the patient could not sustain herself under an operation. In five days from this period she expired.

In the *post-mortem* examination, made in the presence of Drs. Ball and Gunn, the left ovary was found very much enlarged and filled with hydatid cysts. The womb was six inches in length, and on the outer portion of it there were several small tumours not larger than a marble, completely imbedded in the substance of this viscus. A little to the right of the left superior angle of the womb, was found the attachment of the tumour, which has already been mentioned, as having been felt below the umbilicus. There were about two quarts of serous fluid in the abdominal cavity.

It ought to have been stated that, for a year after the enlargement of the abdomen first commenced, Mrs. J.'s increasing size was supposed to be owing to pregnancy.

Remarks. The above are three out of seven well marked cases of ovarian disease, which I have had an opportunity of seeing within the last few years; they are taken from my note-book precisely as they were recorded at the time, and if they have no other

merit, I must at least claim for them fidelity of description. It cannot be denied that disease of the ovary is of far more frequent occurrence than has been generally supposed. And the melancholy consequences which too often ensue from neglecting the malady in its early stage, must be obvious to every practitioner, who reflects for a moment on the extraordinary and various changes in structure, to which this organ, under the influence of morbid action, is liable.

Frequently, the physician will be circumvented by difficulties of the most embarrassing kind, in his attempts to ascertain the existence of ovarian disease. All abdominal enlargements are by no means to be referred to disorganization of the ovaries; and again, the disease of these bodies is not always identical. We have, for example, in one case purulent secretions — in another, large collections of fluid — in a third, steatomatous depositions, extraordinary growths of hair, bone, teeth, &c. &c.: osseous and other heterogeneous formations in the ovaries are not of very rare occurrence.

In Corvisart's *Journal de Médecine*, vol. v. p. 144, there is an exceedingly interesting case of ovarian disease in a girl thirteen years of age, in which were discovered bones, teeth, hair, fat, &c. In the *New-York Medical Repository*, vol. xii. p. 365, Dr. Archer of Maryland, communicated an interesting case of inflammation of the ovarium which ended in suppuration, and was followed by the discharge of a worm about eight or nine inches in length, and also by that of a tooth like a wisdom tooth. In the *Jour. Gen. de Méd.* tom. xvii. p. 462, there is inserted the case of an ovary of an extraordinary size, containing a number of tubercles, in which were found blood, osseous matters, a packet of curled hair, &c. Portal, Morgagni, and the various scientific journals, especially the *Archives Generales de Médecine*, and Bouillaud's *Journal Hebdomadaire*, contain numerous instances of the same kind.

The fluid in a diseased ovary differs in consistence, colour, odour, &c., depending on the degree and kind of disorganization which may have taken place. Dr. Hamilton,* the distinguished Professor of Midwifery in the University of Edinburgh, maintains,

* *Practical Observations on various Subjects relating to Midwifery.* By James Hamilton, M. D., F. R. S. E., part 1st, p. 87.

with some degree of earnestness, that the ovarium, under no circumstances, contains a serous fluid, and, on this assumption, he predicates a facility of distinguishing between the existence of ovarian dropsy and ascites. The learned Professor will find that his distinction will do well enough in theory, but it must, from necessity, yield in practice; for there are numerous instances, in which the fluid contained in an enlarged ovary so closely resembles serum, at least in all its physical qualities, as to render it impossible to distinguish the two. And, again, how often do we observe the fluid drawn off in ascites, to be so modified by morbid influence, as to give it an appearance entirely different from ordinary serum. Besides the difficulty of ascertaining the *character* of the disorganization which may be going on in the ovary, there is often much embarrassment in distinguishing a diseased ovarium from the multitude of morbid enlargements to which the abdomen is, at times, liable. Error on this subject frequently produces the most unhappy consequences. Character and all the dearest social relations have been suddenly destroyed by mistakes into which physicians have heedlessly fallen, in reference to abdominal tumours.

In its early stage, disease of the ovary may be confounded with tubercles of the mesentery, or even of the peritoneum; large collections of indurated fœces in the colon, and schirrus of the pyloric orifice of the stomach, are also said to induce error on this point. When the ovary becomes much enlarged, so as to occupy a considerable portion of the abdominal cavity, it is then frequently mistaken for ascites or pregnancy. Notwithstanding the multitude of diseases which, under certain circumstances, may so closely simulate ovarian enlargement as occasionally to cause error of judgement on the part of the practitioner, yet there is encouragement in the belief that, with due care, and with a mind disposed to enter on the business of investigation *con amore*, truth may be arrived at in almost all instances. Accurate diagnosis is the very foundation of the healing art, and all our efforts in the prosecution of scientific inquiry should be directed to the attainment of this object.

In all cases in which ovarian disease is suspected to exist, it should be our particular care to acquaint ourselves with the history of the symptoms as they first presented themselves. Was

there pain in either iliac region, and was there a sensation of numbness experienced in the corresponding extremity? These are the symptoms which usually accompany this malady, but they are not invariable. It sometimes happens that an ovarium grows to the size of a goose-egg, without having given the slightest uneasiness, and the patient is made conscious of it for the first time in consequence of a fall or sudden turning of the body. She then feels more or less pain in one of the sides; it is attributed to the fall, and nothing more is thought of it. The pain, however, continues, and in examining the side a tumour is recognised. The functions of the uterus are not necessarily interrupted by the occurrence of disease in the ovary, menstruation frequently proceeds with its accustomed regularity, and impregnation is sometimes cotemporaneous with the progress of the disease.

In the *prognosis* of ovarian enlargement is involved much uncertainty. Instances are numerous in which the ovarium, after becoming slightly developed, has remained stationary for years without any accompanying trouble. Again, dropsy of the ovarium has been known to continue for more than twenty years, and the patient enjoy comparative health. On the other hand, the disease has run its course in a very short time, producing the most extraordinary disorganization, and resulting in the death of the patient. Its course is sometimes so rapid as to destroy life in a very few months. Thus, we can scarcely, *a priori*, hazard an opinion, without important reservations, as to the probable issue of this disease. I am of opinion that, in many instances, the ovarium may be under the influence of morbid action, which will remain for a long time latent in the system, until excited by some adventitious agency; such, for example, as pregnancy. Hence in case 1st, recorded above, it is not at all improbable that the fatal termination of Mrs. B.'s life was accelerated by her marriage and subsequent pregnancy; for it is reasonable to suppose that the increased circulation throughout the uterine system facilitated very much the rapid effusion into the different cysts, and the accompanying enlargement of the ovary.

But an important question now arises. If ovarian disease exist previously, will impregnation necessarily cause it to prove

fatal? We answer assuredly *not* in *all* instances. In case 2d, which I have presented, it will be seen that Mrs. L. had been afflicted with an ovarian enlargement for six years previously to her marriage; she was undoubtedly pregnant three months when I was called to see her, and the substance expelled from her womb was a blighted ovum. Although Mrs. L. distinctly says that she had never *experienced the slightest pain in the ovary until about four months after her marriage*, yet we find the tumour gradually yielding to treatment, and it is possible it may remain for a long time in its reduced state. What would have been the effect on the developement of the ovarium if Mrs. L. had gone to her full time, is a matter altogether of speculation.

The *cause* of ovarian enlargement has engaged a considerable share of attention among writers, and numerous theories have been propounded. On the one hand, we are told, that child-bearing produces the disease; but this will not account for it in all cases; for it occurs in the youthful virgin, as well as in the aged matron. Again, it is said, that scrofula is the fruitful source of this malady. The disease, however, often occurs in women who are entirely free from all scrofulous taint. It is unnecessary to allude further to the various opinions of authors on the subject; for any one, who has examined, with due care, the nature of ovarian enlargement, will be forced to admit that, in many cases, it is entirely out of our power to assign any cause for its origin.

The *treatment* of diseased ovary involves considerations of the highest importance. For a long time, some of the ablest practical writers declared their doubts of all curative means, and were content with recommending simply palliatives. But of late, the attention of the profession has been awakened to the great necessity of doing something to arrest the devastating effects of a malady which, if left alone, will often consign its victim to the grave; and hence we have precious results from the enterprise in which many of our brethren have so generously embarked. To no living author is the profession under greater obligations for the faithful and patient elucidation of this subject, than to Dr. Barlow, who, in his "*Records of Ovarian Tumours*," has embodied more important facts with regard to the correct treat-

ment of the disease, than any other writer with whom we are familiar. Dr. Barlow's views are based on pathology, the only true method from which we can expect to derive rational and well-settled principles in the cure of the various maladies to which our poor machines are liable. Dr. Barlow very appropriately observes, that whoever has seen the mass of disease exhibited by an ovary when it has become thoroughly disorganized, will readily admit the utter hopelessness of such total and extensive disorganization being remedied by any curative process with which we are familiar; any which our ordinary medicinal agents permit us the means of instituting or promoting. In cases which, in the earlier stages, yield to medical treatment, so far as to exhibit reduction or subsidence of tumour, we can have no demonstrative evidence of what was the kind or degree of organic change, which produced the tumour; but it seems a fair inference, from the simple fact of such subsidence, that the tumour had not attained the utter perversion of all natural structure, of which the advanced disease is almost universally characteristic. And this distinction, though resting on probability alone, is not unimportant; for it suggests, in the first place, that there is a stage of this disease produced by morbid actions alone, and in which these have not yet caused irremediable disorganization; and secondly, it incites and encourages those remediable procedures by which the disorganized process may be arrested in that stage, in which alone there can be any well-founded hope of their proving effectual.

If, then, it be true that there is a stage of the disease, in which a hope may be rationally entertained of restoring the organ to its original condition, so far, at least, as its functions are concerned, assuredly we should not despair, by unremitting effort, of obtaining so desirable a result.

Dr. Barlow's plan of treatment consists mainly in the general and local abstraction of blood, and in the use of counter-irritants—a mode of treatment, which appears to us in accordance with the strict laws of physiological medicine.

Sophia Wilkins was under the charge of Dr. Barlow, and from her first coming under treatment in September, 1828, until the complete removal of the symptoms of ovarian disease, in June, 1832, the patient was bled from the arm 18 times, losing 190

ounces of blood ; 386 leeches were applied at 31 different periods ; and she was 21 times cupped, 236 ounces of blood being taken. In addition to these measures, she had 12 blisters, and purgatives, and other parts of the antiphlogistic treatment were had recourse to. She has since her recovery been seen repeatedly by Dr. Barlow under slight indisposition, but there has been no renewal of ovarian derangement evinced by either tumour or pain.

The following case, likewise treated by Dr. Barlow, will be read with interest. Mary Ann Scudamore, aged 21, became an out-patient of the Bath United Hospital, on 25th July, 1829. She had at that time acute pains in the abdomen, with confined bowels, having previously suffered from diarrhœa. The kidneys subsequently becoming involved, and the urine suppressed, she was admitted an in-patient, and, after a course of depletory measures, with small doses of calomel and opium, to affect the gums, she recovered, and was discharged "well" on 1st September. The pains, however, returned, and she was re-admitted on the 9th, there being then fullness in both iliac regions. On the 10th, those tumours were prominent, and separated by a depressed line extending from the umbilicus to the pubis. From this time to 17th November, when she was discharged "better," she had occasional diarrhœa, with affections of the head and chest, for which, in addition to the depletory measures which were again had recourse to, appropriate remedies were employed. The gums were again affected with calomel and opium, and tartar emetic frictions used over the abdomen. On 26th December, she again came under treatment, being then affected with cough and dyspnœa in addition to the abdominal symptoms. "The abdomen was more full, the breathing much oppressed, and there was œdema of the lower limbs." She was received into the house on the 6th of January, and suffered much from the abdominal symptoms, with incidental affections both of the head and heart, including several epileptic attacks, for which free depletion, general and local, blisters, calomel, and measures directed to relieve the incidental local affections, were assiduously employed. "On 6th of April, the left hypogastric tumour had become so prominent, that a large caustic issue was established over it. From this time all her maladies subsided, and on the

4th of May, she was discharged much relieved, and made an out-patient." From this time, until 8th September, when she was again admitted, she suffered much from diarrhœa, which, however, abated soon after her coming into the house. A cautious trial was then made with iodine, beginning with small doses, and this was persevered in for about a fortnight; when, in consequence of pains in the head and side, with inordinate action of the heart and hot skin supervening, it was obliged to be laid aside.

By bloodletting, &c., the disturbance was allayed, and she was discharged on 9th of November, the report being "general health much better; tumours remain." On 22d of January, 1831, she was again admitted, requiring diligent and active use of remedies for successive affections of the head, chest, and abdomen. She was bled, cupped, and leeches repeatedly, had blisters several times, and iodine was again tried both externally and internally. "The hypogastric tumours advancing, caustic issues were formed over both, about the middle of April. From this time, the contingent maladies, which had previously abated, continued to decline, and she quitted the hospital on the 20th of May, 'much relieved.'" These issues remained open till the end of July, and were renewed towards the end of August, at her own desire; notwithstanding which, however, and the evident benefit derived from them, she suffered much from the ailment she had previously undergone, with the addition of numbness and loss of power in the lower limbs, and also in one arm. "Under suitable treatment, however, this passed over, and improvement, general and local, ensued; the general health becoming re-established, and the *tumours, at length, sensibly subsiding*. On the 16th of December, she left the hospital, reported as "greatly relieved; tumours considerably reduced; slight diarrhœa alone remaining." From this time to the middle of May, 1833, she suffered much from occasional returns of her former symptoms, for which bleeding was still the remedy which could be most relied on; and, on the 1st of May, a caustic issue was once more formed in the left hypogastrium, in consequence of some evidences of renewed disturbance in the left ovary. At the close of September, she again appeared affected with diarrhœa and pectoral complaints; but by this time "the ovarian tumours had

entirely subsided, and such was her reliance on the amendment experienced in this respect, that, encouraged by the example of her fellow sufferer, Alice Kirkham,* she too had become a married woman." "On the 8th of November, 1834, *she was safely delivered of three female children, who were baptized by the names of Faith, Hope, and Charity.* She suckled the whole for the usual period, and both mother and offspring continued afterwards in perfect health, as I had repeated opportunities of witnessing." Dr. Barlow observes, that "in the course of this protracted disease, she was bled 45 times, to the extent of 384 ounces; was cupped 12 times, to 102 ounces; had 408 leeches applied; 16 blisters; and six caustic issues, four of these being applied over the left ovary, and two over the right."

In extracting the above important case, I am actuated by the hope that it may prove instructive to the general reader, and elicit sufficient attention from practitioners in this country, to cause them, by actual experiment, to test the excellence of the treatment alluded to. One fact is worth a host of theories, and, as Dr. Barlow deals with facts only, his observations are certainly entitled to the calm consideration of his professional brethren. It was with no ordinary pleasure that I perused his excellent paper;† for he had demonstrated, by successful practice, views, which I have entertained and promulgated to the gentlemen, who have honoured my lectures with their attendance since 1830. To many of them, now in this city, and likewise to several medical friends, with whom opinions have repeatedly been interchanged with regard to the nature and treatment of ovarian disease, I beg leave to refer for the fact of my having strenuously advocated the uncompromising use of depletion, especially local, and of counter-irritants, for the arrest of ovarian disease in its early stage. To these measures may also be added the important auxiliary of *pressure*. This latter means will often be followed by the happiest effects. As a sort of expositor of his "*Records*," I earnestly invite the attention of the profession to a

* Alice Kirkham had been also afflicted with ovarian disease, and treated by Dr. Barlow with success. She has since married, and become the mother of a healthy child.

† See Transactions of the Provincial Medical and Surgical Association, vol. iv. London and Worcester, 1836, 8vo. pp. 77.

capital essay *on the medicinal efficacy and employment of the Bath waters, &c.*, by *Edward Barlow, M.D.*, Bath, 1822.

Having already trespassed too long on the pages of this Journal, I find I shall not be able to offer any comments on other modes of treatment suggested by authors, and, more particularly, with regard to the employment of the muriate of lime, so confidently recommended by Dr. Hamilton. At another time these and other points shall be fully discussed, such as the particular circumstances authorizing the practitioner to have recourse to paracentesis, &c. &c., and we will especially consider whether, *in any case, the surgeon is justified in using the knife for the purpose of removing the ovary.*

ART. IV. *Observations on Delirium Tremens, (read before the New-York Medical and Surgical Society, Feb. 16th, 1839.)* By JOHN L. VANDERVOORT, M.D.

IN the following observations, I design briefly to consider the causes which give rise to the pathological condition of those organs on which mainly depends the peculiar phenomena of *Delirium Tremens*, and the treatment which I have found best applicable to cure this disease. The frequent occurrence of this malady,—not only among the poor and labouring classes, but also among those who move in the higher spheres of society,—renders it one of no trifling interest, and demands from the physician the most careful study of its nature, and of the means best adapted to its cure and prevention.

By far the most common cause of *delirium tremens* is the abuse of ardent spirits: it seldom arises from the excessive use of fermented liquors or of opium. Its attacks are mostly confined to those who have, for a considerable time, led a debauched life, and who, from some particular cause, have been suddenly arrested in their career of dissipation. The loss of atony in the brain and nervous system, which is thus induced, together with a corresponding degree of nervous irritability, almost invariably brings on an attack of this disease.

Whether it supervenes upon a sudden debauch, or is occasioned by habitual indulgence, followed by abrupt and total abstinence, is a point on which there is some difference of opinion.

Thus Dr. Snowden, — from whose pen emanated the first account of this disease published in this country, — remarks, “that this species of insanity is mostly to be met with in habitual confirmed drunkards, and, in all cases, so far as my experience extends, makes its appearance on the subsidence of the stimulating effects of the liquor.” Dr. Coates observes, “that this disease is the result, not of the application, but of the sudden intermission of the use of these articles,” meaning narcotic and narcotico-stimulant substances.

On the other hand it is maintained, that “in persons of irritable temperament, and liable to præcordial anxiety, a single excess is sufficient to produce it, but then the disease, though it may be as acute at the outset, is not of the same continuance or fatal tendency, as when preceded by a debilitating course of dissipation.” My own experience, which has been derived from a careful observation of the disease, during a period of nine months, whilst resident physician of the New-York Hospital in 1832-3, from cases met with in private practice, and also in that of the New-York Dispensary for several years, has convinced me that, in some instances, though they are not many, the disease may spring up whilst yet the patient is in the midst of his debauch; several such cases have, at different times, been under my care.

How far *opium* may, under certain circumstances, be able to produce this disease, I am not prepared to say; for though I have met with several incorrigible opium eaters, who, for various causes, were, at times, debarred its use, yet I have never met with an instance in which there were any symptoms analogous to those of the disease which we are considering.

Other agents than these now alluded to, have been alleged capable of engendering an attack of this disease — thus Dr. Roots* in some clinical observations on this malady, after admitting the most common cause of it to be an abuse of ardent spirits, says, “but I have seen as severe a case as I ever met with in my life, where there had been no such abuse, nor abuse of opium, but

* Guy's Hospital Reports.

where it resulted in a young female twenty-two years of age, from having been exposed to excessive privation as regarded nutriment, and almost the comfort of clothing, and from great mental depression and anxiety, in having lost several of her relatives within a fortnight."

It is true that causes like those just mentioned will under peculiar circumstances, produce great mental anxiety and suffering, but we do not think that the symptoms which are thus induced bear any very strong resemblance to those of *delirium tremens*, though they may be alleviated by the treatment which is commonly applicable to that disease.

Of the *pathology* of *delirium tremens* our knowledge is yet very limited: *post-mortem* examinations have shed but little light upon the obscurity in which this subject is involved. In a few instances there has been observed an increased vascularity of the mucous membrane of the stomach, and a morbid state of the liver which obtains in most hard drinkers. In other cases there has been noticed turgescence of the vessels of the brain and its membranes, with some effusion into the ventricles, but in the majority of cases no particular lesions have been detected.

Very opposite theories in regard to the seat of this disease have been predicated upon each of these autopsic conditions. One of these theories favours the gastric origin of the disorder, and is supported by Dr. Klapp: another locates the disease in the brain and its appendages, and is maintained by Drs. Potter and Armstrong: whilst a third regards it as an irritation of the brain and nervous system, and is advocated by most of the writers of this country.*

In support of his view of the pathology of *delirium tremens*, Dr. Klapp remarks, "that upon examination we will find the patient to have a foul tongue, together with nausea and vomiting, and that when an emetic is administered, its operation brings away from the stomach the vitiated contents of that viscus of a dark coloured tarry consistence, and that by means of this class of remedies the disease is speedily and almost uniformly cured." This doctrine has met with bitter opposition on the part of those

* Lévillé thinks that it consists in a morbid and special excitement of the brain, independently of *arachnitis* and *gastro-enteritis*, which sometimes complicates it. (a)

(a) *Mémoires de l'Acad. Roy. de Med. et Chir. tome 1mo.*

practitioners who, with more of obstinacy than wisdom, reject, as useless, all evacuants, because they do not chime in with their peculiar views: yet, in the treatment of this disease we will find it to be of great importance to attend to the condition of the stomach.

Whoever has carefully observed cases of this affection must, I think, be convinced, that there almost always exists great derangement of the chylopoietic viscera, and that a similar state is often found in those who are much addicted to a free use of stimulating drinks. This is very evident in the frequent attacks of sick headache, foul stomach, and depraved appetite, to which such persons are liable.

The second theory to which we have alluded, is that of the late Dr. Potter of Baltimore, who conceived the proximate cause of this disease to consist either in a venous congestion of the brain and its membranes, or in an inflammation of the membranes of this organ. Dr. Armstrong, who seems to have favoured this view of the subject, regarded it simply as a state of congestion of the venous system, in which the brain appeared more especially to participate.

If the view of Dr. P. is correct, then delirium tremens is neither more nor less than phrenitis, and, regarding it as such, we are at no loss to account for his sanguinary mode of treatment. But the phrenitis of authors is not characterized by the peculiar symptoms which so strongly and so clearly distinguish this malady; we do not, in general, behold the quivering tongue, nor the trembling hand, nor those singular hallucinations of the mind which are present in delirium tremens. In the former disease there is greater heat and dryness of skin; a quicker and harder pulse; more heat and pain in the head; a dryer tongue; more suffusion of the eyes; more intense fever: but, above all, in the treatment adapted to each, they differ very widely.

A third class of pathologists regard this disease as depending upon an irritation of the brain and nervous system, as manifested in the restlessness of the patient, his irritability, the disturbed state of his mental faculties, his complete insomnolency and delirium. This doctrine is the one which is now more commonly received, and with certain modifications and restrictions it leads to the more rational mode of treatment.

This hasty sketch of the different views of the pathology of delirium tremens, will suffice to show all that is known on this subject. To adopt either of them to the exclusion of the others, would lead to injudicious, if not injurious practice. As in fever the whole system is affected, so in delirium tremens; as in fever, the secretions are depraved, the functions of the brain and nervous system more or less disturbed, the circulation more or less deranged, so in delirium tremens. Thus, which ever view we adopt, we must be guided by all the circumstances of the case, in the proper selection of our remedies.

SYMPTOMS.—When a person is about to have an attack of this disease, he usually evinces, for several days previous to its actual occurrence, some change in his manners; he is more than commonly fretful, and easily irritated by trifling events; his appetite fails him, and he is apt to be troubled with nausea and vomiting. We observe, too, a slight tremor of his hands and of his protruded tongue, and his nights are passed in uneasy slumbers.

When the disease is fairly set in, there is a material aggravation of all these symptoms, accompanied by more or less delirium, which is constant or remittent. His dreams are wild and frightful, and give him much uneasiness: both day and night he gropes about his room in search of imaginary objects, or he pictures their existence upon the walls of his apartment. A thousand phantoms of his active imagination constantly torment him, and give him no rest.

For hours together, if unrestrained, he will wander whithersoever he can go, and seldom manifests the slightest fatigue. At times he is bathed in a profuse clammy sweat, and he not unfrequently discharges from his stomach a copious quantity of bilious matter, which apparently affords him considerable relief.

In several instances I have witnessed the most violent epileptic convulsions, now and then following each other in rapid succession. None of these cases were rendered fatal by this complication.

Patients with this disease have usually a cheerful countenance, and when not violently, or maliciously opposed, are quite manageable. They are exceedingly cunning and sly in their movements, and very adroit in accomplishing a wished-for object.

The *diagnosis* of this disease rarely presents any difficulty;

it is characterized by such well marked symptoms as to make it easily recognisable, and when there is any doubt, the previous history of the case will serve to dissipate it.

TREATMENT.—A good deal of discrepancy of opinion prevails as to the proper method of treating this affection; the different plans which have been devised have each their advocates and supporters. Few, however, at the present day, uphold the use of the lancet.

There is, in most individuals who have been long accustomed to a free indulgence in ardent spirits, and who subsequently suffer an attack of delirium tremens, a strong tendency to sink into that state which marks the collapse stage of typhus fever. This is more particularly observable in those cases which have been protracted either by improper treatment, a total abstraction of all stimuli in a broken down constitution, or a refusal on the part of the patient to take proper nourishment.

Whatever then has the effect greatly to exhaust the energies of the system, will tend to induce this condition, and when once brought on, the most powerful stimulants will usually fail to excite a re-action.

Still, by some, the lancet has been upheld as one of our most potent means of checking this disease; it was so considered by Dr. Potter, and with some exceptions, by Dr. Armstrong.

Sutton, Dupuytren, Rayer, and Lévillé, regard venesection as dangerous in this affection, whilst Dr. Ware mentions 13 cases which were bled from the arm in the course of this disease, only two of which died, both being affected with peripneumony.

In this country, the more prevalent opinion among practitioners is decidedly adverse to the employment of the lancet. My own experience enables me to coincide in this opinion.

By Dr. Klapp, emetics have been much extolled, and apparently on good grounds; his success with this class of remedies is eminently calculated to arrest our attention, however widely we may differ from him as to the extent to which they should be carried.

In a report recently made by him, he says: "of 51 cases, all but one were cured without the use of a grain of opium, or a drop of alcoholic drink of any description—the unsuccessful case died of epilepsy."

Dr. Eberle bears testimony to the frequent usefulness of emetics in the management of this malady, and Dr. S. Brown remarks: "Although it has not been our practice to depend exclusively upon emetics in the treatment of delirium tremens, we can bear testimony to the utility, in some cases, of premising an emetic to the use of opium. And no doubt, this is often an important step in the treatment of this disease."

In most of the cases which have fallen under my care, I have commenced the treatment by giving an antimonial emetic, or a combination of antimony and ipecac, and I have always found the patient benefited by the operation of the medicine. The nausea thus induced had a most calming effect, and if not followed by sleep, it so prepared the system for the administration of opium, that a comparatively small quantity of it sufficed for that purpose. In some cases I prescribed a full dose of calomel and antimony. The joint operation of which seldom failed to be followed by an amelioration of the symptoms, and then by giving nauseating doses of antimony, almost complete control was had over the malady.

The advantage of this mode of treatment consists in its so preparing the system, or reducing it to that state in which the exhibition of opium, if resorted to, is followed by the happiest effects; it also obviates the necessity of having recourse to those heroic doses which some practitioners have advised.

The influence which *opium* has over nervous diseases, renders it an article of great value in the treatment of delirium tremens; in regard to the best mode of administering it, there is much variety of opinion. Drs. Jackson, Coates, and others, relying solely on its efficacy to control this affection, prescribe it at the very onset in large and repeated doses; others prefer small doses at short intervals.

It is observed by Dr. Coates, who attacks this disorder at its very onset with unusually large doses of opium, "that he has never seen, read of, or heard of an instance in which opium was productive of harm." Dr. Eberle does not coincide with this remark, and Dr. Roots,* in his *Clinic on this Malady*, says, "that in two instances it has occurred to him, and that two others were related to him by an eminent practitioner, that by

* Ut Supra.

commencing with a dose, say one grain of the acetate or muriate of morphia, such an impression has been made on the brain and nervous system, that the patient has never been aroused from it."

Dr. Ware also mentions a case in which death was produced by large doses of opium, the patient falling into a state of coma, from which he could not be roused.

Such unhappy consequences from the use of opium, are fortunately rare, and may always be avoided by commencing with a dose of one, two, or three grains, and repeating the same at the interval of an hour or two, its effects, in the *meantime*, being carefully watched. When the edge of the disease, so to speak, has been blunted, large quantities of opium will seldom be required. Sleep having once been induced, is commonly followed by restoration to health, but to prevent a relapse, an anodyne should be given for several successive evenings.

Another mode of treating this disease, and one which is almost exclusively followed by some practitioners, is to give stimulants liberally, either alone, or in combination with laudanum. True it is, that under such treatment, the disease may be cured, but I think it well calculated to exercise, among the poorer class of patients at least, a most unfavourable influence. The drunkard sees the same hand which so often before raised the poisoned cup to his lip, again employed to convey the same as its antidote. The power of medicine, under such circumstances, he is apt to regard as too impotent to perform what is required of it, and whilst he swallows with his wonted gusto his former enemy, he is now compelled to look upon it as his best friend. In this way his relish for the inebriating draught is ever kept up, and after a brief respite from former ailments, he again falls a victim to his merciless foe.

True, there are cases which imperatively demand the liberal use of stimulants; in broken down constitutions it would hardly be safe suddenly to interrupt the long continued custom of free drinking, for thus the strength would speedily be exhausted, and death would very likely ensue.

So, too, in cases which follow a severe injury, as a fractured limb, stimulants should not be wholly withheld.

ART. V. *A Case of Dislocation of the Patella upon its Axis, with Comments.* By JOHN WATSON, M.D. (Read before the New-York Medical and Surgical Society, September 7th, 1839.)

THE details of the following case may not be uninteresting to the Society. The case itself is of some importance, inasmuch as it establishes a new fact, or to say the least, a controverted point in the surgical pathology of the patella.

Henry Burton, a carman, of rather slender frame, and about thirty-five years of age, was on horseback in a crowd at the Park, August 21st, 1839, waiting to see the public reception of the Hon. Henry Clay. In the confusion of the crowd, another horseman backed his horse against him, and the animal's hip striking against Burton's right leg, injured him so severely that he was unable to say how, or in what direction he received the shock. He was carried immediately to a neighbouring hotel.

I saw him soon after the accident, in connection with Dr. L. C. Ferris, Dr. Stearns of the northern part of the city, and Dr. Thomas F. Cock. The patient was complaining of severe pain; the leg was perfectly straight, but could be flexed about to an angle of 140° without increasing his suffering. The patella appeared to be slightly drawn up, and it was twisted upon its axis, presenting its outer edge, in a prominent hard line, in front of the knee: its inner edge was resting either in the groove between the condyles of the femur, upon which its posterior face should naturally play, or in the small indenture on the anterior face of the femur, immediately above this groove. The anterior surface of the patella was turned inward, its posterior surface outward, and it rested nearly at right angles with its natural position. Its upper and lower attachments were both preserved, and could be distinctly felt; and a sort of band appeared to pass from its under, or, as it now lay, its outer face, inward to the deeper portion of the knee-joint. This band, as I conceived, was caused, either by the tension of the capsular ligament, or by the rupture of its edge, as it passes from the outer side of the patella. The position of the bone was so well marked that no one at all acquainted with the anatomy of the part, could mistake the nature of the accident.

With the leg extended, and the anterior muscles of the thigh forced downwards as much as possible, pressure was made upon the patella with the expectation of forcing down its prominent edge, and pushing the bone directly into its proper position. The effort was followed only by a severe increase of pain; the bone remained permanently fixed. Another attempt was made to cant its posterior edge inward, and to bring its anterior edge outward, without pressing it against the condyles of the femur, by forcing the head of a key against the posterior, now the outer face of the patella, (using this as a fulcrum,) and pressing the prominent edge of the bone towards the outer condyle. This manœuvre gave him no pain; but was as fruitless in its result as the other. At length the knee was forcibly bent, and immediately straightened again; and then, by canting the patella as before, and pushing it slightly downwards and inwards, it sprung, with a sudden snap, into its proper position. The reduction would, doubtless, have been facilitated by flexing the thigh strongly upon the pelvis. This, however, was not attempted, and the manipulation just described, answered every purpose.

As soon as the bone was replaced the pain ceased; and the patient, thinking himself well again, stated that he could now walk as well as ever. A straight splint was applied behind the limb, so as to secure the joint, and the patient was sent home in a carriage, with directions to keep the knee at rest for a few days, and to apply to it an evaporating lotion.

Most authors who have spoken of luxations of the patella, state that this bone is subject only to the outward and the inward lateral displacement. Sir Astley Cooper admits also an upward, and Boyer speaks of both an upward and a downward displacement. But the two former displacements, according to all the writers who have hitherto dwelt upon these accidents, are the only ones that can occur, independent of a rupture, either of the ligament of the patella, or of the common tendon of the extensor muscles of the leg. In a hasty perusal of most of the surgical authorities, as well English as French, I have met with but one instance bearing any relation to the case just related. "I was informed by Mr. Welling, formerly surgeon at Hastings,"

says Sir Astley Cooper, "that he was called to a case in which the patella was dislocated upon its edge. The nature of the accident was very obvious, as the edge forced up the integuments to a considerable height between the condyles on the fore-part of the joint. Mr. Welling reduced the dislocation, but with considerable difficulty, by pressing the edges of the bone in opposite directions."*

Sir Astley Cooper gives this observation in a distinct paragraph, without remarks upon it; and as if in need of confirmation, he allows it no place in his enumeration of the several luxations of the patella. Nothing of the sort is mentioned in Mr. S. Cooper's Dictionary. Boyer, after speaking of the lateral displacements, states, that independent of these, some surgeons have thought that this bone might be luxated "by turning half-way round upon itself, and resting with its edge in the articular pulley of the femur; but," says he, "it is impossible to conceive how the tendon of the extensor muscles of the limb, and the ligament of the patella, could be twisted in unison with the rotation of the bone upon itself; and it is still less conceivable how these parts could be completely turned round from before backwards, as some pretend to have seen."†

Where the luxation of the patella outward is but partial, the signs of the accident must be more like those of the case I have described, than where the outward luxation is complete. Yet the difference is still too striking to allow this accident to be confounded with a partial luxation outward. "The external displacement," says M. Sanson, "is easily recognised by pain, inability to walk, and deformity of the knee: by the ease with which the inner edge of the articular pulley of the femur, as well as that part of the surface of this pulley which is not covered by the patella, can be felt beneath the integuments; by the prominence upon the external edge of this pulley, formed by the patella, the outer edge of which is *slightly directed forward*, whilst its anterior face is turned *a little inward*, and its posterior face is so situated on the external condyle that the outer portion of it may be easily touched; by the tension and external deviation of the tendon of the muscles on the anterior part of

* Cooper on Dislocations and Fractures, 4to. Lond. 1829, p. 175.

† Boyer, *Maladies Chirurgicales*, Paris, 1834, tome 4, p. 349.

the thigh, and of the inferior ligament of the patella; by the permanent extension of the leg.”*

But in the case which I have described, the leg could be slightly flexed; no part of the pulley, except its elevated borders at the condyles of the femur, could be felt; *the patella was drawn upwards, and twisted nearly at right angles with its proper position, so that its anterior face was directed inwards, and its outer edge was thrown completely forward, forming an uneven and very prominent line beneath the skin in front of the joint.*†

But though the position of the patella in this case was very different from that which it occupies in the sublucation outwards, yet it is easy to see how the latter accident might be resolved into this. For the patella in slipping outward, while passing over the outer edge of the pulley of the femur, must, from the very shape of the bones, have its outer edge tilted forward, and its inner edge, in consequence, thrown a trifle backward. Now, whilst in this position, and before the patella is allowed to reach fairly to the anterior face of the condyle, a sudden contraction of the rectus and vasti muscles must tend to bring the bone back again within the line of their action: so that instead of slipping completely over the condyle, it will either fall back into its natural position; or its inner edge being arrested, and the bone being thus prevented from moving inwards bodily, its outer edge must be drawn forward towards the axis of the limb, and the accident I have described will be thus produced.

Though some authors describe the lateral displacement as one, occasionally, difficult of reduction, yet as a general rule, the bone slips into its place very readily, from the slightest pressure upon

* Dictionnaire de Médec. et Chirurg. Pratiques, tome 11me p. 270.

† Since writing these remarks, Dr. Thos. F. Cock has called my attention to an abstract of two cases, published in Johnson's Journal, that, at first view, appear to be of the same nature as the case I have related. But on referring to the Medical Gazette, vol. 2. p. 754, I find that Mr. Mayo has given a woodcut illustrative of the first of these cases, which proves to be precisely what M. Sanson has described as the sublucation outwards. The other case referred to in Johnson's Journal, (July, 1829.) is quoted from Rust's Magazine for 1828, and is said to be similar to Mr. Mayo's. It appears, however, to be more like mine, but not having the original to refer to, I am unable to form a correct opinion of its true nature. Dr. Wolff, who had charge of it, was unable to reduce it. He divided the tendon above the patella, and the ligament below it; but without bringing the bone into place. The patient, finally, died from the disease of the knee joint which followed the operation.

it, especially where the knee is extended, and the thigh flexed upon the pelvis; or, as some direct, by attempting to flex the knee, and thus elongate the muscles in front of the thigh. But in the case of Burton, just related, as well as in the case reported by Mr. Welling to Sir Astley Cooper, the patella was firmly fixed, and reduced only after considerable manipulation.

In a case of complete dislocation of the patella outward, which occurred to me, July 25th, 1838, the slightest push of the thumb was sufficient to restore the bone to its proper place. And somewhat contrary to the diagnostic signs usually given as characteristic of this accident, the leg in this instance was slightly but firmly flexed. The case was that of a young lady of about 22 years of age, remarkably fleshy, but of lax fibre. The accident occurred in dancing. In working the joint immediately after reducing the dislocation, it gave a rough and rubbing sound that might have been mistaken for the crepitus of a fractured bone. Some œdema and effusion within the capsule followed the accident. But the application of leeches, rest in an elevated position, evaporating lotions, and finally a roller, were sufficient, in the course of a week or ten days, to restore the joint to its proper condition.

Authors differ as to the frequency of simple dislocations of the patella. By referring to some, we might be led to believe these accidents of very frequent occurrence. Such, I suspect, is not the fact. Although I have heard of a few cases in the practice of my acquaintances, the two which I have now mentioned are all that have fallen immediately under my own observation. Mr. Liston, in his *Elements of Surgery*, states that he has never met with a single case.

HOSPITAL REPORTS.

Statistics of the Bloomingdale Asylum for the Insane. By JAMES MACDONALD, M.D., Physician to the New-York Hospital, late Resident Physician of the Bloomingdale Asylum. (Read before the New-York Medical and Surgical Society, April, 1838.)

THE condition of the insane, and the establishment of hospitals for their treatment, are now attracting, in various directions, the notice both of legislators and physicians. Some attention, therefore, to the statistics of such public institutions, may not be unprofitable.

I propose to give a series of tables relative to the patients admitted into the Bloomingdale Asylum during a period of years, and to follow them by such remarks as the various subjects may suggest.

The Bloomingdale Asylum is a branch of the New-York Hospital. The latter, which is one of the oldest charities in the country, received its charter when New-York was a colony of Great Britain. The building was not completed when the war which separated the two countries broke out. It was not, therefore, devoted to the purposes for which it was founded, until January 3d, 1791, when it was opened for the reception of patients, and eighteen were admitted.

The earliest account of the admission of *insane* patients into the New-York Hospital, is found in the first number of the Medical Repository, published in July, 1797. It there appears that, in the month of May of that year, two cases of mania were

admitted, two were cured, and one died; that, in the month of June following, *seven* cases of mania were admitted, two were cured, and two relieved. So it seems that, at an early period, a portion of the building was set apart for the accommodation of the insane.

The next notice of insane patients in the Hospital, is taken from a table exhibiting the numbers remaining in the house, and those received during the following months of the year 1798:

	Remaining from last month.	Received this month.
April	7	0
May	7	4
June	9	3
July	9	1
August	8	1
September	9	1
October	7	0
November	5	0
December	5	2

As early as 1802 a plan was "in agitation to adapt the Hospital more extensively to the accommodation, management, and cure of lunatics."

From a "Brief Account of the New-York Hospital," published in 1804, we learn that, during the eight years which began with the 31st of January, 1795, and ended with the 31st of December, 1803, the number of patients admitted was 4,922. Of these, 215 were lunatics.

The rapid increase of insane patients, their necessary confinement in a limited space, the evident evils resulting from the imperfect manner in which they were lodged, their proximity to the other wards, and the consequent annoyance of the sick, determined the Governors of the Hospital to erect a distinct building for their use. Application was then made to the State Legislature for assistance, and such an act was passed on the 14th March, 1806, as enabled the Board to lay the corner stone of a new building the ensuing summer. This edifice, called the "Lunatic Asylum," was completed and "opened for the reception of patients, on the 15th July, 1808, when nineteen were removed from the other building, and forty-eight more admitted; making in all sixty-seven."

At this period, Dr. Archibald Bruce was appointed physician to the Asylum, and continued to serve in that capacity until 1817, when Dr. William Handy succeeded him. Dr. John Neilson was elected to fill the vacancy caused by the resignation of Dr. Handy, in 1819, and was made physician to the Bloomingtondale Asylum when this institution was opened in 1821. Dr. Neilson continued to visit the Asylum, first as attending, and subsequently as consulting physician, until 1831, when he resigned.

When Mr. Wetmore, the present worthy superintendent, took charge of the Hospital in 1808, the insane patients were confined in the basement of the main building. A few slept up stairs.

The building which is now the marine department of the Hospital, was occupied as a lunatic asylum for a period of thirteen years. But as early as 1815, it was deemed necessary to make still more ample arrangements. The Hospital, which had been built almost literally in the country, was now found, in consequence of the rapid increase of inhabitants, to be in the centre of a bustling population. This being incompatible with the treatment of a class of patients requiring both seclusion and free exercise in the open air, some benevolent individuals among the governors, (and of these the ability, zeal, and quiet, though efficient exertions, of the late Thomas Eddy can never be forgotten,) conceived the plan of purchasing a farm at a convenient distance from the city, and of forming thereon a sort of insane colony. It was at this period that the celebrated investigation before a committee of the British House of Commons, "into the state of madhouses," was going on, and that the almost wonderful success of the Friends' Retreat was promulgated. Mr. Eddy made a communication on the subject to the Board of Governors, and pointed out the advantages that would flow from an enlarged and liberal system of moral treatment, similar to that pursued at the Retreat. Participating in the philanthropic spirit of the founders of that institution, the Governors of the New-York Hospital applied to the State Legislature for pecuniary aid to purchase ground, and construct suitable buildings. The result was an appropriation of ten thousand dollars annually, until the year 1857.

Steps were immediately taken to procure a suitable location, and, for this purpose, a tract of land on the high ground south of Manhattanville, near the seven mile stone, was purchased; a plan for building was adopted, and the corner stone laid on the 17th May, 1818.

The location of the Bloomingdale Asylum is on a fine swell of ground, which, on the south and west, almost imperceptibly declines by a gentle slope to the level of the adjacent country, while on the north and east it terminates more abruptly, in a bold ridge extending across the island, and commanding the pass of the valley below. This situation, though perhaps not apparently so, is, after Fort Washington, the highest point of the island. The geological formation of this, as, indeed, of many other portions of the country, is of a species of granite or gneiss, with a superstratum of clay, forming a complete basin, and preventing the water which falls on it from finding its way into the depths of the earth. This is probably the main cause of the fevers which prevail in the neighbourhood, but it is a cause which the draining, grading, and opening of streets, are daily diminishing.

The beauty of the grounds, and the views from the main building, are almost unequalled. The approach to the Asylum from the southern entrance, by the stranger who associates the most sombre scenes with a lunatic hospital, is highly pleasing. The sudden opening of the view, the extent of the grounds, the various avenues gracefully winding through so large a lawn; the cedar hedges, the fir and other ornamental trees tastefully distributed or grouped, the variety of shrubbery and flowers; in fine, the assemblage of so many objects to please the eye, and relieve the melancholy mind from its sad musings, strike him as one of the most successful and useful instances of landscape gardening.

There is, indeed, no private residence, or public establishment in the vicinity of the city, which for beauty of situation, or exercise of taste in the distribution of grounds, can compare with it. And it is a source of congratulation to all who wish to see useful institutions permanent, that the State Legislature, with the consent of the Common Council of the city, have passed a law, preventing the opening of certain streets near the asylum; there-

by preserving inviolate, grounds which have been consecrated to the most benevolent of human objects, the protection and treatment of the insane.

In describing the Bloomingdale Asylum, it must be borne in mind, that it is the parent institution of the country; that it is the first of any note established here, exclusively, for the insane; that it is, in truth, the pioneer in this department of philanthropy; that whatever improvements have since been introduced in the construction of asylums in neighbouring states, the impulse was given by the Governors of the New-York Hospital, and that the plans adopted are all more or less copies of the institution founded by their humanity.

Though the Bloomingdale Asylum, like all other similar edifices in this country within the knowledge of the writer, will not serve as a model for those that are to be built in different parts of the Union; there are many things in it to copy, as well as to avoid. Great advancement has of late years been made in this species of architecture, and it is only by examining, comparing, and combining the various improvements which have been made, that anything like perfection is to be obtained.

The original plan consisted of a centre building, 211 feet in length, and 60 in depth, with two wings in a line, at the distance of 50 feet, to be connected with it by colonnades; each wing being 194 feet in length, and 50 in depth, thus forming an extended front of 699 feet. The main edifice being the only one which, at that time, either the number of patients demanded, or the means of the society warranted the governors in building, is of Jersey free stone, and consists of a centre part 57 feet long, with wings extending, on each side, 77 feet. Its height is three stories above the basement.

The experience of seven years convinced the governors of the necessity of entirely separating noisy from quiet patients, and in the year 1829, a wing was put up at a certain distance from the main building, for the former class of males. A similar building was completed during the summer of 1837, for the corresponding class of females. These wings, which are of brick, are on the north of the main building, at the distance from either extremity, of about 150 feet. They are at right angles with it, and if ex-

tended so as to join it, would together form three sides of a hollow square. This method of grouping the buildings, renders the general *surveillance* more easy; but its chief advantages over the original extended plan are, that it is less expensive, and will in time to come, when the avenues are opened, afford greater seclusion to the inmates.

The buildings under consideration, which were constructed with reference chiefly to utility, are without those ornaments that distinguish the orders of architecture. The exterior of the main building presents an appearance of simplicity, beauty, and strength, happily combined. One of the ruling objects of the architect, besides constructing it in a manner simple, neat, and secure, was to avoid giving it the semblance of a place of confinement. In accordance with this view, cast-iron window sashes have been used in place of grates, and the interior has been finished and furnished like a private dwelling. Some of the rooms are equal to any found in the best hotels and boarding-houses, and the long corridors running the length of the wings, are light, airy, and uncommonly beautiful. It is worthy of remark, that the ceilings are higher, and the ventilation better than in most of our public buildings.

The interior of the principal building, though on a scale of grandeur seldom to be met with in similar structures, is deficient in the means of classification. This deficiency has, however, been mainly supplied by isolating the more turbulent in separate wings.

The main building of the Bloomingdale Asylum was completed and opened for patients in the month of June, 1821, when the government of the institution was organized as follows: The governors selected from their board a committee of six, to whom was assigned the charge of the establishment, including its pecuniary affairs and moral management. These, who are called the asylum committee, meet at the institution once a month, and investigate its affairs. A sub-committee from the same, consisting of two persons, meets weekly to examine the house, to receive and discharge patients, and attend to the various matters of detail to which their attention may be directed. An inspecting committee from the other members of the board, also visits

the asylum once a month. The same duty is incumbent on the president and vice-president.

On the occasion of first opening the asylum, 52 patients were removed from the hospital in town, but the majority of these (probably nine-tenths,) were incurable, and consequently not materially benefited by the change.

From this period, to the close of the year 1836, 2037 patients were received into the Bloomingtondale Asylum. From this number the following tables have been drawn. Some of them, unfortunately owing either to neglect in filling up the register, or inability to procure the necessary information, are not so full as might have been wished. Other tables again only include 10 and 12 years. As they stand, however, the utmost reliance may be placed on their accuracy.

TABLE OF YEARLY ADMISSIONS.

Dates.	Admissions.	Dates.	Admissions.	Dates.	Admissions.	Dates.	Admissions.
1821	124	1825	156	1829	91	1833	138
1822	102	1826	142	1830	134	1834	102
1823	131	1827	134	1831	151	1835	138
1824	121	1828	134	1832	118	1836	121

Though the mean of admissions, during the series of sixteen years, amounts to one hundred and thirty, the difference in the annual admissions varies from ninety-one to a hundred and fifty-six. This variation might be attributed to general causes, as, for instance, the great commercial crisis of 1825, when the greatest number of admissions was recorded, and the prosperous year of 1829, when the very small number of ninety-one was received into the Asylum, but it is probably owing more to circumstances having no connection with the causes of the malady. Thus since 1821, asylums for the insane have been established in different parts of the country, poor-houses, with accommodations for the insane, have been constructed in many of the counties of this State, and such restrictions have been placed upon the admission of patients with delirium tremens as to lessen their annual numbers from forty-three to sixteen, so that the differences may be accounted for, in part—at least, by extraneous causes.

Table of the different forms of Insanity, including 1680 cases admitted from 1824 to 1836 inclusive.

Mania,	.	.	.	.	.	.	.	.	770
Monomania,	.	.	.	.	.	.	.	.	386
Dementia,	.	.	.	.	.	.	.	.	226
Idiocy,	.	.	.	.	.	.	.	.	7
Delirium a potu,	.	.	.	.	.	.	.	.	291
Total,									1680

Besides the two hundred and ninety-one cases of delirium a potu, the total number of sixteen hundred and eighty includes about one hundred other cases of the different forms of mental disorder induced by the vice of intemperance, making, altogether, three hundred and ninety-one from this cause.

TABLE OF ADMISSIONS ACCORDING TO MONTHS.

	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	Total of each month.
January, . .	5	2	9	9	4	8	4	4	6	5	26*	8	90
February, . .	7	8	3	13	5	7	5	11	10	7	3	8	87
March, . .	7	11	13	9	6	6	10	12	8	6	10	8	106
April, . .	19	9	11	6	5	10	13	13	13	10	13	9	131
May, . .	19	16	15	16	7	17	14	12	8	8	12	12	156
June, . .	19	12	21	10	12	14	18	13	13	12	14	15	173
July, . .	14	16	15	16	12	12	11	10	46*	9	9	12	182
August, . .	12	17	13	16	7	12	28*	6	12	12	9	16	160
September, . .	17	13	7	10	7	10	19*	10	7	5	10	10	147
October, . .	8	13	11	13	9	5	5	13	10	9	15	10	121
November, . .	14	13	11	7	1	15	12	6	9	13	10	4	115
December, . .	11	11	8	9	16	17	12	9	6	6	7	9	121

In order to arrive at a correct estimate of the numbers admitted each month, it will be necessary to deduct the patients sent from the New-York Alms-house, as they were merely transferred from one hospital, where they had been received some time previously, to another. Thus from January we deduct twenty, from July thirty-one, from August seventeen, from September eight, making the scale of admissions as follows.

January, . .	70	May, . .	156	September, .	136
February, . .	87	June, . .	173	October, .	121
March, . .	106	July, . .	151	November, .	115
April, . .	131	August, . .	143	December, .	121

* The unusually large number admitted during these months, may be explained by stating that most of them were transferred from the Insane Hospital for paupers, at Bellevue.

ADMISSIONS ACCORDING TO THE SEASONS OF THE YEAR.

Winter.		Spring.		Summer.		Autumn.	
December,	121	March,	106	June,	173	September,	136
January,	70	April,	131	July,	151	October,	121
February,	87	May,	156	August,	143	November,	115
Total, 278		Total, 393		Total, 467		Total, 372	

It appears from the above tables that the three summer months supply the largest, the spring months the next, and the winter months the smallest proportion of patients.

Taking the months singly, the smallest number of admissions is in January, the largest in June. Beginning with January, there is a regular rise in the scale of admissions until the month of June is reached, when there is an uninterrupted descent, month after month, to December.

Comparing the admissions into the Bloomingdale Asylum with those into the Royal Hospital at Charenton, they are so similarly graduated according to months, that we are induced to extract the following numbers from the report of M. Esquirol.

Table of Admissions during 1826-7-8 into the Royal Hospital at Charenton.

January, . . . 37	May, . . . 44	September, . . . 47
February, . . . 49	June, . . . 70	October, . . . 49
March, . . . 53	July, . . . 61	November, . . . 35
April, . . . 58	August, . . . 64	December, . . . 52

Although the gradation is not so regular as in the former table it is sufficiently so to prove the existence of certain fixed laws, governing the developement of insanity.

After allowing the difficulty of transporting patients in cold weather, to account, in part, for their diminished admissions into public asylums, there can be no doubt that those diseases of the brain, usually called mental diseases, originate more frequently during summer than winter; that physical causes, particularly such as produce derangement of the digestive and hepatic functions, and of the surface, are more active at the former, than at the latter season. May not the same be said of moral causes, particularly in a community like this, for is it not in the early part of the summer that the minds of mercantile men are most intently occupied in their hazardous pursuits?

Every one who is familiar with the interior of insane hospitals, knows that they contain by far the largest proportion of recent and violent cases, during the hot months.

TABLE OF RECENT CASES ACCORDING TO MONTHS.

	1825	1826	1827	1828	1829	1830	1833	1834	1835	1836	TOTAL.
January, . .	1	2	6	3	2	4	4	2	3	1	28
February, . .	5	6	3	7	2	3	7	3	1	1	42
March, . .	2	5	8	6	3	3	5	1	5	5	43
April, . .	10	3	9	3	4	7	5	6	8	5	60
May, . .	10	12	9	12	5	9	2	3	5	5	72
June, . .	10	8	13	9	7	9	4	8	7	6	81
July, . .	8	6	7	11	7	10	8	2	5	7	71
August, . .	7	12	10	12	4	7	6	6	4	8	76
September, .	10	7	3	6	6	8	4	3	1	3	51
October, . .	6	7	7	6	8	4	3	2	4	8	55
November, .	7	8	5	3	1	0	6	5	4	0	39
December, .	4	6	4	8	13	0	5	2	5	4	51

This table, which corresponds very nearly with the one before it, is a better indication of the influence of seasons in causing insanity, for all the cases included in the latter, originated immediately before their admission into the asylum.

TABLE OF NATIVITIES OF PATIENTS.

New-York, ...	617	Virginia, ...	4
Ireland, ...	139	Maine, ...	3
New-Jersey, ...	103	N. Carolina, ...	4
England, ...	85	Santa Cruz, ...	3
Connecticut, ...	75	Canada, ...	2
Massachusetts, ...	56	Spain, ...	2
Scotland, ...	28	West Indies, ...	3
France, ...	20	Holland, ...	2
Pennsylvania, ...	18	Italy, ...	2
Rhode-Island, ...	13	Switzerland, ...	2
Germany, ...	12	District of Columbia, ...	2
Vermont, ...	11	Indiana, ...	1
N. Hampshire, ...	8	Delaware, ...	1
Wales, ...	6	Louisiana, ...	1
New-Brunswick, N. S. .	5	Georgia, ...	1
Sweden, ...	5	Russia, ...	1
S. Carolina, ...	4		
Maryland, ...	4		
		Total,	1273

TABLE OF PLACES OF RESIDENCE.

New-York, . . .	1069	West Indies, . . .	3
New-Jersey, . . .	78	Ohio, ...	3
Connecticut, . . .	18	Maine, ...	2
Massachusetts, . . .	15	Louisiana, ...	2
Pennsylvania, . . .	14	Rhode-Island, ...	2
S. Carolina, ...	5	Mississippi, ...	1
Canada, ...	5	Tennessee, ...	1
N. Carolina, ...	4	Maryland, ...	1
Vermont, ...	3	Illinois, ...	1
N. Brunswick and N. Scotia,	3	Alabama, ...	1
Michigan, ...	3		
Georgia, ...	3	Total,	1237

TABLE OF THE AGES OF PATIENTS ADMITTED.

	No. of Patients.		No. of Patients.
7 years of age, . . .	1	30 to 40, ...	315
9, ...	1	40 to 50, ...	197
12, ...	2	50 to 60, ...	92
13, ...	1	60 to 70, ...	30
15 to 20, ...	39	70 to 80, ...	11
20 to 30, ...	414	80 to 90, ...	2

The above table does not include second admissions or natural idiots. All patients, aged 20, (and there are many of these,) are put down as between 20 and 30.

This table shows a result differing, in some respects, from the calculations of European writers. Of 4409 admissions of lunatics into the different hospitals of France and England, the largest proportion was between the ages of 30 and 40; the next between 20 and 30; the next between 40 and 50; the next between 50 and 60; the next between 10 and 20, and the next between 60 and 70.

Of 1125 patients admitted into the Bloomington Asylum, it is here shown, that 414, or nearly 37 per cent., were between the ages of 20 and 30; while, in the European hospitals above quoted, it appears that the largest proportion, or rather more than 32 per cent., were between the ages of 30 and 40; and only 25 per cent. between the ages of 20 and 30.

Though the vice of intemperance may be more common, early in life in this country than in Europe, and may, in part, explain the discrepancy, we are not willing to admit that it is

sufficient to account for the whole difference, but believe this is owing, at least in part, to the more early developement of the intellectual and moral faculties, which the comparative infancy of the country, the rapid progress in civilization and the useful arts, the nature of our civil institutions, and the physical influence of the climate necessarily call forth.

Most of the cases which occurred before the age of 15, were connected with organic disease of the brain.

TABLE OF ADMISSIONS OF MARRIED AND SINGLE PERSONS.

Married,	.	.	.	.	.	.	600
Single,	.	.	.	.	.	.	573
Widows and Widowers,	.	.	.	.	.	.	84

It would at first appear that the married is more favourable to the production of insanity than single life; but when we reflect that the larger proportion of persons marry before the age of 30, we are obliged to acknowledge that celibacy has its full share of mental derangement. Our table of married and single patients corresponds, nearly, with that of Esquirol.

	Esquirol.	Bloomingdale.
Married,	45 $\frac{1}{2}$ per ct.	47 $\frac{3}{4}$ per ct.
Single,	47 $\frac{1}{3}$. .	45 $\frac{1}{2}$. .
Widows and Widowers,	7 . .	6 $\frac{2}{3}$. .

But with the difference, that in the one there is 2 per cent. more of the married, and 2 per cent. less of the single. It is well known that there is a much larger proportion of unmarried persons in France than in America.

TABLE OF ADMISSIONS ACCORDING TO SEX.

Date.	Males.	Females
1821	77	47
1822	66	36
1823	83	48
1824	77	44
1825	102	54
1826	97	45
1827	107	27
1828	86	48
1829	66	25
1830	97	37

Date.	Males.	Females.
1831	102	49
1832	82	36
1833	89	49
1834	67	35
1835	75	63
1836	73	48
	1346	691

2037 Total.

The very great disparity in the proportion of the sexes admitted, may be accounted for by the fact that intemperance, the most prolific cause of insanity, is a vice much more common among men than among women; and by the belief that people are generally much more willing to trust their male than their female relatives to the care of strangers.

TABLE OF THE PROFESSIONS OR OCCUPATIONS OF PATIENTS ADMITTED.

These have been formed from the admissions that took place between the years 1825 and 1836. The occupation, or want of occupation, of 804 was ascertained; and of these but 59 were women: leaving 743 men, concerning whom something definite in this respect was placed on record.

The professions, besides being arranged alphabetically, and according to numbers, beginning with the highest, are thrown into classes, for the purpose of showing, as far as may be without certain data, the effects of commerce, of study, of bodily labour, of condition, &c., on the mind.

It may be added, that the patients here enumerated, were not only received from all parts of our own state, but from other states.

TABLE ARRANGED ALPHABETICALLY.

Actress	1	Factory Girls	2	Pilots	2
Apothecaries	7	Farmers	106	Pedlars	3
Auctioneers	4	Farm Labourers	12	Physicians	12
Bakers	5	Gambler	1	Portrait Painter	1
Barber	1	Gardeners	2	Potters	2
Boatman	1	Gentlemen	5	Printers	7
Bookbinders	2	Governess	1	Officers, Army	3
Bookseller	1	Grocers	25	Officers, Navy	3
Butchers	5	Hatters	5	Officer, Customs	1

Cabinetmakers, Turners . . . 8	House-Servants:— (Male 1, Fem. 21) 22	Sailmakers . . . 2
Carpenters . . . 25	Iron Founders and Smiths . . . 18	Sea Captains . . . 16
Carriagemakers and Wheelwrights . . . 6	Labourers . . . 35	Seamen . . . 17
Cartmen . . . 6	Lawyers . . . 20	Seamstresses . . . 29
Chemists (pract.) . . . 2	Light House Keeper . . . 1	Shoemakers, Saddlers . . . 15
Chair-makers . . . 3	Machinists . . . 4	Soapmaker . . . 1
Clergymen . . . 6	Malsters, Brewers . . . 3	Soldier . . . 1
Clerks . . . 45	Manufacturers . . . 6	Statuary . . . 1
Cook . . . 1	Market Women . . . 2	Students . . . 19
Collector . . . 1	Masons . . . 11	Tailors . . . 19
Convicts (State P.) . . . 11	Merchants, persons engaged in traffic, . . . 89	Tavernkeepers . . . 12
Consul . . . 1	Milkman . . . 1	Teachers . . . 10
Coppersmith . . . 1	Millers . . . 2	Tinworkers . . . 2
Coopers . . . 2	Nurses, (females) . . . 2	Tobacconist . . . 1
Curriers, Leather-Dressers . . . 16	Painters, Glaziers . . . 8	Upholsterers . . . 4
Dentist . . . 1	Papermaker . . . 1	Watchmakers, Jewellers, Silver-smiths . . . 5
Distillers . . . 2	Pawnbroker . . . 1	Weavers . . . 4
Dry Goods' Dealers . . . 3	Planters . . . 2	White-lead workers . . . 3
Editor . . . 1		No occupation . . . 54
		804

All the different occupations found on record amount to 82, variously distributed among 804 patients, including 54 who are distinctly put down as having no profession. Of the 82 different occupations, 35 (considerably less than one-half) furnish 663, or nearly five-sixths of all the cases of insanity. If the 54 mentioned as having no occupation be taken from the whole number, then the 35 professions furnish seven-eighths, while the remaining 47 give but one-eighth of all the instances of insanity enumerated above. Taking these as data, does insanity fall proportionably on persons engaged in the various pursuits of life? or do these operate as predisposing or exciting causes?

TABLE OF PROFESSIONS, OCCUPATIONS, AND CONDITION, THAT FURNISH THE LARGEST NUMBER OF INSANE, ARRANGED ACCORDING TO PLURALITY.

Farmers . . . 106	Sea Captains . . . 16	Apothecaries . . . 7
Merchants, Traders . . . 89	Curriers, Leather-Dressers, . . . 16	Printers . . . 7
Clerks . . . 45	Shoemakers, Saddlers . . . 15	Carriage-Makers . . . 6
Labourers . . . 35		Wheelwrights, . . . 6
Seamstresses . . . 29		Cartmen, . . . 6

Carpenters . . .	25	Farm Labourers . . .	12	Clergymen . . .	6
Grocers . . .	25	Physicians . . .	12	Manufacturers . . .	6
House Servants . . .	22	Tavern keepers . . .	12	Bakers . . .	5
Lawyers . . .	20	State P. Convicts . . .	11	Butchers . . .	5
Tailors . . .	19	Masons . . .	11	Gentlemen . . .	5
Students . . .	19	Teachers . . .	10	Hatters . . .	5
Iron Founders,		Cabinetmakers,		Watchmakers,	
Smiths . . .	18	Turners . . .	8	Jewellers, Sil-	
Seamen . . .	17	Painters, Glaziers	8	ver-smiths . . .	5
					Total, 663

It is evident, from an inspection of these tables, that the classes most subject to insanity, are those which are connected, either directly or indirectly, with commerce, and dependent upon it for a livelihood. This, of course, comprehends persons of a great variety of professions, besides many who are only secondarily affected by the chances and changes of the times.

Of 804 persons whose occupations were ascertained, 242, making about $30\frac{1}{6}$ per cent. were dependent on commerce.

The producing classes, including farmers, mechanics, labourers, &c., and making up the great bulk of inhabitants, furnish 395 out of 804 cases of insanity, or $49\frac{1}{4}$ per cent. Of these the workers of the soil, including 106 farmers, 12 farm labourers, 2 planters, and 2 gardeners, amount to 122, or rising $13\frac{1}{2}$ per cent.; and mechanics to 206, or rather more than 23 per cent. of the whole number of vocations ascertained.

Persons of studious habits, including the learned professions, and amounting to 67, form about eight and one-third per cent. of the whole number, leaving but twelve and one-half per cent. from all the occupations not embraced in the above classes.

To ascertain the influence of certain trades, or the prevalence of insanity in particular classes, it will be necessary to compare the numbers arranged as above, with the numbers belonging to the different trades and classes as found actually existing in the community. In Williams's Register for 1834, is a classification of the citizens of New-York. This, though not including many unmarried persons, and others in humble life, because they do not rent tenements, and of course, entirely excluding the occupations of rural districts, furnishes the only data for comparison that we can find. We have, therefore, taken a few of such, as

from their occupations, must necessarily rent houses or offices, or from other circumstances, have a place in the Directory, and compared them with the corresponding professions found in our tables. It is to be regretted that the few and imperfect data do not allow us to procure results in many trades and pursuits, (in the sedentary mechanical occupations for example,) in which such would be interesting. It will be borne in mind, that the per cent. here obtained is not so much per annum; it only expresses the comparative liability of the different classes to insanity.

2260 Merchants and Traders,	89	in our Table, making nearly 4	per cent.
2106 Grocers, ...	25		$1\frac{1}{5}$
94 Auctioneers, ...	4		$4\frac{1}{4}$
209 Apothecaries & Druggists,	7		upwards of $3\frac{1}{2}$
142 Booksellers & Stationers,	1		about $\frac{2}{3}$
550 Dry goods Dealers, . .	3		little more than $\frac{1}{2}$
249 Tavern & Hotel Keepers,	12		$4\frac{4}{5}$
82 Tobacconists, ...	1		$1\frac{1}{6}$
573 Lawyers, ...	20		$3\frac{1}{2}$
499 Physicians,†			upwards of $2\frac{1}{2}$
284 Teachers, ...	10		$3\frac{1}{2}$

Without knowing the actual number of persons engaged in those occupations that expose their followers to the inhalation of deleterious gases, there appears to be a very large proportion of such on our list. Including two practical chemists, eight painters, one manufacturer of soap containing Prussic acid, and three white-lead workers, there are not less than fourteen.

Not supposing that there is any inhalation of poisonous air, the same remark may be made of the number of curriers and tanners, for surely sixteen of this trade must be a very large proportion.

TABLES OF CAUSES.

In arranging the Tables of Causes, the usual division into physical and moral has been adopted.

I. *Physical Causes.*

Hereditary, ...	155	Suppression of established dis-	
Cerebral disease connected		charges, ...	5
with apoplexy, palsy, and		Acetate of lead in cider, and	
epilepsy, ...	55	fumes of white lead, . .	5

Bodily disorder, . . .	48
Following parturition, . .	43
Constitutional, . . .	34
Succeeding fever . . .	31
Functional and structural dis-	
ease of uterus, . . .	20
Masturbation, . . .	16
Injury of the head, . . .	15
Congenital, . . .	13
Rapid growth, unequal and sud-	
den development of body oc-	
curing at the age of puberty, 13	
Metastasis, . . .	9
Cessation of menses, . .	8
Insolation, . . .	6
Smallpox, Measles, & Scarlatina, 6	

Connected with lactation, . .	4
Succeeding repelled eruptions, 4	
Syphilis and mercury, . .	3
Old age, . . .	2
Spinal disease, . . .	2
Pregnancy, . . .	2
Sedentary life, . . .	2
Excessive use of tobacco, . .	2
Hygiene pills, . . .	2
Suddenly checked perspiration, 2	
Change of climate, habits, &c. 2	
Excess in venery, . . .	1
Inhalation of Prussic acid, . .	1
Total of physical causes, 511	

II. Moral Causes.

Pecuniary embarrassments, dis-	
appointments, and losses, 59	
Religious excitement, . .	40
Domestic trouble, . . .	31
Over exertion and abstraction	
of mind, . . .	26
Grief for loss of relatives, 23	
Unrequited love, . . .	20
Unhappy marriage, . . .	17
Anxiety of mind, . . .	17
Wounded pride and disappoint-	
ed ambition, . . .	13
Religious anxiety, doubt, and	
despondency, . . .	12
Remorse, . . .	13
Terror, . . .	9
Avarice, . . .	8
Religious terror, . . .	7
Defective mental and moral	
education, . . .	6

Sudden reverse of fortune, 3	
Sudden prosperity, . . .	3
Indulgence of violent temper, 3	
Excessive novel reading, . .	3
Want of employment, . .	4
Jealousy, . . .	2
Loss of office, . . .	2
Indulgence in speculation, 2	
Political excitement, . .	2
Anti-masonic excitement, 2	
Ungratified desire to return to	
native land, . . .	1
Excess of joy, . . .	1
Desertion after seduction, 1	
Indulgence in theatrical amuse-	
ments, . . .	1
Total of moral causes, 392	

Total physical and moral causes, 843

When we look over our extensive country, and consider its immense progress in civilization, wealth, and luxury ; the varied and increasing temptations to embark in the wildest schemes of speculation ; the sudden accumulation and loss of fortune ; the

fluctuations of trade ; the interest taken by almost every citizen, in every political and financial movement that agitates the community ; the activity of mind every where apparent ; the fierce strifes of the predominating passions of ambition and avarice involving so many minor ones, and extending their influence throughout every class of society ; we are compelled to believe that we have among us as many active causes of insanity as any country in Christendom.

If the few States which have made returns of their insane, be taken as a standard for the whole, and if European statistics of insanity can be relied on, facts go to show, that the proportion of lunatics to the whole population, is greater in America than in Europe. But we believe, that European statistics of insanity cannot be relied on. The only country in which a regular systematic plan of enumeration has been adopted, is Norway, where the proportion of lunatics and idiots, is *one* to every 551 inhabitants, a proportion considerably greater than exists in this country.

In the other countries of that hemisphere, the sources of information on this subject are partial and imperfect, being generally no other than hospitals, and public and private institutions ; so that the large number of lunatics living at home and in private families, is not taken into account.

It yet remains for us to learn, whether insanity is more common in Europe or America, whether the infancy or old age of a nation is most productive of mental disorder. This is, indeed, a singular inquiry, and it is hoped that, in the next* general census, measures will be taken to ascertain the number of lunatics and idiots.

It will also be important to learn how far diversity of climate, the various habits of the people in different sections of the country, and the institution of slavery, affect the mind.

We have no data upon which to form a correct opinion *as* to the prevalence of insanity among the aborigines. If it be possible to extend the census among these, some interesting results may doubtless be procured on various subjects.

* Since this paper was read, the writer has succeeded, through the exertions of Mr. Curtis, Member of Congress from New-York, in procuring the amendment of the bill for taking the census of the United States, so as to include lunatics and idiots.

On taking a general survey of the above tables, the first thing that arrests the attention is the great majority of physical over moral causes. If, however, we subtract from the former, the large amount of causes entitled hereditary, the excess of physical* causes will be reduced from one hundred and seventy-nine to twenty-four. Still the results of the Bloomington tables differ so widely from those of some of the tables of Salpêtrière and Charenton, published by Pinel and Esquirol, that we are induced to enter into an examination of the causes of this difference.

It may be premised that the registry of the causes of insanity was made at Bloomington without reference to theory or preconceived opinions; but it must be confessed, with some skepticism as to the preponderance of moral causes set forth in some of the French reports. Who that has followed the physician, in his daily visits through the wards of a French hospital, has not been struck with the large number of cases of purely physical disease, ascribed by the sufferers to moral causes—to "*chagrin*?" Taking the statements of patients and friends then, is it not probable that insanity is often improperly imputed to moral causes? And in large establishments, like those of the Salpêtrière and Bicêtre, where so many patients are admitted, and where so little can be learned of the history of each case, the physician is obliged to rely for "cause" on the vague statements of unprofessional relatives, or the still more vague accounts of entire strangers,—of an officer of the police, for instance, or of some individual who may not have seen the patient till an hour before. Persons not belonging to the medical profession are too apt to impute insanity to causes acting solely on our immaterial nature, and for no other reason than that they conceive there must be an analogy between cause and effect. These, without reflection, give as "cause," any disappointment or excitement, however trivial, or however often it may have occurred in the same individual without leaving the least mental disorder. Relying on such vague statements, physicians too often, it may be supposed, overlook the real or most important cause, which may

* In the following calculations it may be repeated that intemperance, the most prolific of all causes, has been omitted. As nearly as can be ascertained it has been the cause of nearly one quarter of the cases admitted.

lie hid in some organ or system, and may have been a long time acting insidiously; and mistake the first effect or symptom of insanity for its cause. Thus it is very common to say, that the insanity of a patient whose mind dwells on religious subjects, has been caused by religion, when, in fact, his unreasonable or incoherent ravings on this topic, are merely the effect of mental disorder. Without denying that erroneous views of religion, particularly in its most sombre and threatening shape — of religion in which the feelings only are enlisted, and the depressing passions elicited, sometimes, and perhaps not unfrequently, cause insanity, — we believe that the majority of cases attributed to this class of causes, are produced by bodily disorder.

In a country like this, where so much attention is paid, early in life, to moral and religious culture, what can be more natural, when mental disorder arises, either from moral or physical causes, than that the ideas which made the earliest and strongest impression should be most prominent? This mode of mental operation accords with the common observation of the effects of diseases and injuries of the brain.

The alienation of affection from its natural and long-cherished objects, is perhaps the most uniform symptom of insanity; yet no one thinks of imputing insanity, in most cases, to attachment of friends, to the love of a mother for her offspring, or the devotion of a child to his parent. Another cause having disordered the mind, perversion of feeling occurs as a symptom. Thus it is, in many cases, termed religious insanity.

Other forms of insanity, as those connected with the puerperal state, and those depending on disorder of the abdominal viscera, both of which are often characterized by delusions on the subject of religion, and on that of domestic relations, may also be cited as instances in which the cause is overlooked, and the disease ascribed to one of its symptoms.

The results of our tables then, differing as they do from those of Salpêtrière and Charenton, we would mainly ascribe to the better opportunities of inquiry which the comparatively limited number of admissions at Bloomingdale has given us.

It is generally supposed that in this malady there is uniform similarity between cause and effect — that the disease being apparent, the cause may, with certainty or probability, be de-

duced; or that the cause having occurred, the effect may be predicted. Thus it would be expected that the loss of property, or misfortune, would cause melancholy; and sudden access of fortune, joyousness; but the contrary is, not unfrequently, the fact. Numerous instances in support of this might be cited. One of the most remarkable cases of insanity at present in the Bloomington Asylum, is that of a merchant, who, after failure and the loss of all his property, became deranged. He now considers himself, as he always has done since the occurrence of insanity, the richest man in the world; and, as far as belief in the possession of wealth can give him an imaginary importance and make him happy, is one of the most enviable of men.

Like causes then, occurring in different individuals, must not be expected to produce like effects; for these will be modified by peculiarities of mind, temperament, and organization.

In examining the different causes constituting the two classes, we will begin with those denominated physical.

If *hereditary predisposition* be included in this class (and it is evidently the proper place, if it be arranged under either of the general divisions) it stands beyond all comparison the highest on the list: there being no less than one hundred and fifty-five out of eight hundred and forty-three cases attributed to it; making more than eighteen per cent., or between one-fifth and one-sixth of all the causes.

To those who look forward to the progressive improvement of mankind, this is a frightful proportion. As statutes, even if it were possible to enact them, can never prevent the entailment of this worst of human ills, it becomes the duty of physicians to exercise all their professional and personal influence, to prevent intermarriages in families where insanity is known to be hereditary. Instances have come under the writer's observation, in which whole families, consisting of ten and twelve members, have, after arriving at puberty, become deranged, and most of whom married and left children to transmit their malady. A man brought to the Asylum his wife, whom he had kept chained for fifteen years, and by whom he had had, during that period, six children. During a part of the time she was so dangerously violent that her infants were only put to her for the purpose of suckling, and immediately removed.

Intermarriages for successive generations between a few families of originally sound minds, are also known to cause mental infirmity. The large proportion of lunatics among the royal families of Europe is accounted for in this way.

One of the most intelligent members of the Society of Friends in Great Britain, and the author of a highly interesting work on the celebrated York Retreat, informed the writer, that the proportion of lunatics and idiots among his sect in England amounted to one in 200. Considering that there are only 20,000 Friends in England, and that marriages have been confined, for many generations, to this comparatively limited circle, the very great prevalence of insanity among them must be attributed, in a great degree, to this cause.

The next cause in frequency is found to be *cerebral disease*, including cases complicated with epilepsy, apoplexy, and palsy, and numbering no less than 55. If 15 cases, caused by injury of the head, and 6 by insolation, (the effect of which is, in fact, inflammation of the brain,) be added, we have no less than 76, out of the total of 843 causes, or 9 per cent., originating in the encephalon itself.

Under this head is included the "*Paralysie Generale*" of Calmeil, a form of palsy, until recently, unknown either in England or America.

Forty-eight cases have been put down in the register from which the tables are drawn as arising from *bodily disorder*. This division of causes is made up almost entirely of disorder of the functions of digestion and nutrition, of agents acting indirectly upon the brain, through the medium of the nerves of organic life. Insanity arising from disorder of this portion of the nervous system, usually assumes the form of hypochondriasis, monomania, or melancholy, and is often preceded or accompanied by dyspepsia, disease of the liver, chronic diarrhœa, displacement of the arch of the colon, &c.

Forty-three cases followed *parturition*, and assumed the different forms of mania, monomania, melancholy, and dementia. Besides these, two cases occurred during pregnancy, and four during lactation.

Thirty-four cases are arranged under the head of causes denominated *constitutional*. This term has been used to designate

those cases of insanity which succeed former attacks without the recurrence of the original cause, or the occurrence of new causes, and which may be said to depend on acquired predisposition. They may be placed in the same category with those connected with hereditary predisposition. Instances of this kind not unfrequently occur, in which, after several successive attacks, the unfortunate subjects, late in life, become confirmed lunatics. In some of these cases, though no hereditary predisposition could be traced, the parents or some of the family were unusually subject to other diseases of the nervous system.

The physical cause next in frequency appears to be *fever*, which, in 31 instances, so affected the brain and nervous system, as to end in insanity.

Functional and organic *disease of the uterus*, chiefly the former, accounts for 20 cases, while eight occurred at the period of the final cessation of the menses, and were evidently connected with this function. If to these be added the 49 cases which happened during pregnancy, parturition, and lactation, we have the very large number of 77 instances of mental derangement out of 511 from physical causes, dependent on the peculiarities of the female system.

The next cause in frequency is *masturbation*, which, as show by the tables, has given risen to 16 cases of insanity; making more than three per cent. of the physical, and little less than two per cent. of moral and physical causes combined.

Of 789, nine cases of insanity admitted into the Salpêtrière in 1811 and 1812, not one case is imputed to this cause. The same may be said of 437 patients admitted into Esquirol's private establishment.

In the "Dictionnaire des Sciences Medicales," Esquirol gives a table of 480 causes of mania, eight of which were masturbation; making rather less than two per cent. The same author gives another table of 374 causes of melancholia, six of which are masturbation; forming less than two per cent. Another of Esquirol's tables, drawn from the records of the "Maison Royale de Charenton," gives 23 instances of masturbation in 408 causes; making about five and a half per cent.

The interesting reports of the able physican of the Massachusetts State Lunatic Hospital, shows a still larger proportion.

By these the per cent. of admissions from masturbation varies during several years from five to twenty-one and a half per cent. The difference between all the tables above-named, except Esquirol's last, and the Massachusetts report is so great, that it seems almost impossible to account for it. Does the state of society in rural districts, which it may be supposed send most of the patients to the Massachusetts Hospital, favour this vice? And does the well known libertinism of cities prevent it? There can scarcely be any hesitation in answering these queries in the affirmative. But even the allowing of this does not account for all the discrepancy. Though masturbation may be a much more prolific source of insanity in some districts and states of society than in others, yet we are inclined to think that this vice is often given as the cause, when, in fact, it is only one of the effects of the malady. A man of strong passions, deprived of reason, and confined within the walls of a lunatic asylum, will indulge his propensities in the only way left him; hence patients are often detected in the very act of onanism, and their insanity instantly ascribed to it as the undoubted cause. On the other hand, we can readily conceive instances in which, from delicacy on the part of physicians and friends, and cunning on the part of the patient, this cause may be overlooked. Of its baneful effects, both on mind and body, when indulged, there can be but one opinion; and we have no doubt that the deterioration which takes place in lunatics who have become insane from other causes, is often owing to subsequent indulgence in this vice.

Rapid growth, sudden and unequal developement of the body occurring about the age of puberty, has, according to our tables, been the cause of thirteen cases of insanity. This is a cause which, I believe, has been noticed by neither writer or practitioner. Several young persons, soon after arriving at the age of puberty, having been sent to the Asylum without any assignable cause for their derangement, I was led to inquire into their histories, and found that, for a short time prior to the manifestation of insanity, their growth had been singularly rapid. From the absence of other causes, from the exact coincidence between the occurrence of insanity and the rapidity of growth, from the appearance of disproportion in different parts of the

body, and particularly in the relative size of the head and stature, and from the tendency of the disease to terminate in fatuity, I was led to believe that these cases arose from some organic change in the brain, but have not since been able to corroborate the opinion by *post-mortem* examinations, because these patients soon arrived at a certain degree of imbecility not incompatible with health and longevity. Persons becoming insane at this period of life are very apt to fall into the habit of masturbation, to which, though merely the effect, the disease, I am inclined to think, is often improperly ascribed. To this class of causes thus briefly referred to, I hope at some future day to return, and to lay before the society some interesting facts connected therewith.

Thirteen cases only are found to be *congenital*. They were all idiots. Nine cases are attributed to *metastasis*, and six to *insolation*. Ten were connected with *cutaneous affections* and repelled eruptions.

Moral causes.—The most interesting fact resulting from an inspection of the table of moral causes, is the very large proportion of cases arising from the indulgence of *covetousness*. Three cases are put down to sudden reverse of fortune, three to sudden prosperity, two to indulgence and disappointment in speculations, eight to avarice, and 59 to pecuniary losses, embarrassments, and disappointments, making altogether 75, out of 332, (all the moral causes;) being 22 per cent., or between one-fourth and one-fifth, arising from inordinate indulgence in the propensity to accumulate.

The next moral cause is connected with *religion*. As above-mentioned, many cases are attributed to this source, or rather to false religious views and practical extravagances, which, in fact, arise from other causes. In constructing the table, care was taken to exclude such causes of insanity as were evidently dependent on other causes; still it is believed cases are included which have been erroneously imputed, by the friends of patients, to religion. Forty cases are put down to religious excitement, seven to religious terror, twelve to religious anxiety and doubts; making in all 59 cases. Though these different terms might be merged into one, it has been thought better to copy them exactly as they were given by friends, and registered in the case-book.

Domestic trouble is the next cause in frequency. It gave rise to 31 cases. To these may be added 17 cases attributed to unhappy marriages, making altogether 48 from domestic difficulties.

Over-exertion of mind and mental abstraction, with bodily inactivity, have been the causes of 26 cases of insanity, or of rather more than one in every 32 from both moral and physical causes. Esquirol, in one of his reports, shows that rather less than one in every 35 cases proceeds from excessive study. Great activity of the intellect, it is believed, rarely produces derangement, unless all the energies of the mind be concentrated upon a single subject with the exclusion of rest and exercise. Hence persons of partial genius, who have originated new theories or inventions, by magnifying their importance, by constantly revolving them in their minds, and excluding all other ideas, not unfrequently end by falling into delusions. How many alchemists, in former times, became monomaniacs, and how many schemers in our own day have begun by planning perpetual motion, and ended their career as madmen! Johnson, in his *Rasselas*, gives a beautiful illustration of the effect of mental abstraction, in the old philosopher who shut himself up in a tower for the purpose of observing the phenomena of the clouds and atmosphere, and after long and close attention to the subject, declared he had got entire control of the weather.

All public excitements, and particularly those which arouse the selfish passions and induce terror, beget victims to insanity. The French revolution is perhaps the most remarkable example of an influence of this kind that modern times have given. The various excitements of our own country, though happily on a much more humble and harmless scale, have, as shown by the tables, caused insanity. Within the writer's own experience, the Anti-Masonic excitement, the Jackson excitement, and the Anti-Jackson excitement, the Bank excitement, the Abolition excitement, and the speculating excitement, have each furnished the Asylum with inmates.

Remorse is given as the cause of 13 cases. The same number of patients was sent to the Asylum from the State Prison, and it is believed that the majority of these are included under this head; but upon making further inquiry into the history of

these causes, mental has been found in some of them co-existent with moral aberration, so that it is doubtful if punishment, confinement without social intercourse, and remorse had been the cause of insanity, or mental disorder the cause of moral delinquency. The connection between intellectual and moral derangement (if the latter term may be applied to those who have sinned against social order) is a curious subject for investigation, and involves some intricate questions in ethics and medical jurisprudence. Still, the inquiry cannot but serve the cause of humanity. It is the remark of a learned German physician, who probably knows more of the annals of crime than any man living, that one of the results of his examinations into the statistics of Europe and America is, that mental keeps pace with moral disorder.

TABLE OF DISCHARGES, AS RECOVERED, IMPROVED, BY REQUEST, IMPROPER OBJECTS, ELOPED, AND DIED; WITH THE PER CENT. OF RECOVERIES AND DEATHS; AND THE TOTAL NUMBER ADMITTED EACH YEAR, FROM THE OPENING OF THE BLOOMINGDALE ASYLUM IN 1821, TO THE CLOSE OF THE YEAR 1836.

Year.	Admitted.	Recovered.	Improved.	Discharged by request.	Improper objects.	Eloped.	Died.	Per cent. of Recoveries.
1821	124	23	7	9	3	0	2	18 $\frac{1}{2}$
1822	102	48	22	18	0	1	5	47
1823	131	55	13	35	0	6	5	42
1824	121	48	27	22	0	8	11	39 $\frac{2}{3}$
1825	156	71	42	63	0	0	3	45 $\frac{1}{2}$
1826	142	69	18	42	0	2	11	48 $\frac{1}{2}$
1827	134	67	26	34	0	4	9	50
1828	134	59	29	28	0	1	13	44
1829	91	49	19	19	0	1	9	53 $\frac{3}{4}$
1830	134	56	41	20	0	1	7	41 $\frac{1}{2}$
1831	151	76	17	29	4	0	19	50 $\frac{1}{2}$
1832	118	44	31	39	0	6	15	37 $\frac{1}{2}$
1833	138	58	10	15	2	3	10	42
1834	102	51	16	36	0	2	14	50
1835	138	58	11	12	0	3	13	42
1836	121	66	26	16	0	1	14	54 $\frac{1}{2}$
2037	898	355	437	9	39	160		

Per cent. of Recoveries from 1821 to 1836 inclusive, . . . 44

Per cent. of Recoveries from 1825 to 1836 inclusive, . . . 46 $\frac{1}{2}$

This table presents a succinct view of the admissions and discharges, the proportion of recoveries, &c., for a series of years. Taking all the admissions from year to year, it appears that the ratio of recoveries increased, though not regularly, to the close of 1836. Deducting, however, from the admissions and dis-

charges cases of delirium a potu, which were more numerous in the former than in the latter years of the institution, the late reports show a much more decidedly favourable result. For instance, in the report of 1824, 40, of 121 admissions were cases of delirium a potu — 48 were discharged recovered, 35 being recoveries from delirium a potu, leaving but 13 recovered from other forms of disease; while by the report of 1836 it appears that of sixty-six recoveries, but eighteen were from delirium a potu, leaving forty-eight from other varieties of insanity. During the year 1825 the admissions from delirium a potu were as high as 43, while in 1833-4 they were but 15 each year.

The report for 1836, shows that 57 recent cases were admitted during the year, and that 12 remained in the house at the close of the preceding year, making altogether 69 recent cases under treatment. It also shows that 56 recent cases were discharged recovered, which, added to 12 remaining in the asylum, so far advanced in convalescence that their recovery was almost certain, made 68 recoveries in 69 recent cases, or upwards of 98 per cent.

During the same period 64 old cases were admitted, and 10 discharged recovered, making a per cent. of 15 and two-thirds. Besides the old cases thus dismissed, six remained in the house, either entirely restored, and waiting for their friends at a distance to come for them, or so far improved that their final recovery was no longer doubtful.

Many of those included in the column headed *improved*, were discharged from the Asylum in a state of convalescence, and subsequently recovered. Could it have been practicable to have omitted reporting these until after recovery, which would not have been unfair as they were actually cured at the Asylum, our tables would show a much more favourable result than they now do.

The great number of patients discharged by request is accounted for by the fact, that large numbers were frequently transferred to the New-York and other Alms-houses, as these establishments had room for their insane poor. It happened several times that 20 or 30 were transferred to the City Alms-house at at once. On the other hand, whenever the poor-houses became crowded, large numbers of old cases were returned to Bloomingdale, thereby swelling the list of admissions with incurables.

In order to form a fair estimate of the proportion of deaths, it was necessary to ascertain the average number of patients in the Asylum, throughout each year. This has been done with much accuracy, and the per cent. of deaths deduced by taking the actual number as they appear annually on the printed reports. The results will be given in one of the subsequent tables.

TABLE OF RECOVERIES OF THE DIFFERENT SEXES.

Males Recovered.	Males Admitted.	Females Recovered.	Females Admitted.	
1821	20	77	3	47
1822	38	66	10	36
1823	37	83	18	48
1824	41	77	7	44
1825	57	102	14	54
1826	50	97	19	45
1827	53	107	14	27
1828	39	86	20	48
1829	34	66	15	25
1830	45	97	11	37
1831	58	102	18	49
1832	28	82	16	36
1833	38	89	20	49
1834	38	67	13	35
1835	35	75	23	63
1836	38	73	28	48
649	1346	249	691	
48½ per cent. recovered.		36 per cent. recovered.		

This difference in the curableness of the sexes arises from there being a much larger proportion of cases of delirium tremens and temporary mania, among males than among females — and from the greater unwillingness on the part of friends to place their female than their male relations in public institutions.

TABLE OF RECOVERIES OF OLD AND RECENT CASES.

	Old Admitted.	Old Recovered.	Recent Admitted.	Recent Recovered.
1824	70	4	51	44
1825	67	1	89	70
1826	49	0	93	56
1827	42	2	92	65
1828	42	4	92	55
1829	28	3	63	46
1830	61	0	73	56
1831	67	8	84	68
1832	44	1	74	43
1833	79	2	59	56
1834	59	10	43	41
1835	83	6	55	52
1836	64	10	57	56
	755	51	925	708

The recoveries in old cases are rather less than seven per cent.

The recoveries in recent cases are rather more than 76½ per cent.

This table proves, as clearly as figures can demonstrate, the greater curableness of recent compared with old cases of insanity.

TABLE OF RECOVERIES ACCORDING TO MONTHS.

Owing to the deficiency of the records during the earlier years of the Institution, this table includes only those recoveries which took place after the beginning of the year 1825.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1825	4	3	3	6	5	7	6	14	3	10	4	5
1826	3	5	3	3	7	4	9	6	10	9	5	5
1827	5	1	5	6	5	8	7	7	7	5	4	8
1828	3	3	6	2	7	5	5	5	7	6	3	8
1829	3	3	3	2	3	2	8	3	2	3	6	8
1830	5	1	5	3	4	4	3	5	5	6	4	4
1831	3	3	4	3	7	12	3	9	3	7	8	4
1832	1	3	5	5	2	3	7	3	8	3	4	3
1833	3	2	0	7	10	2	2	6	7	8	6	7
1834	3	3	8	2	4	1	1	7	10	6	4	2
1835	1	4	10	5	6	3	4	3	6	9	4	3
1836	2	5	2	4	5	4	6	5	6	7	13	7
	36	36	54	48	65	55	61	73	74	79	65	64

Classing the recoveries according to the four seasons, it results that the

Winter months give 136 recoveries.

Spring " " 167 "

Summer " " 189 "

Autumn " " 218 "

showing a pretty regular progression in recoveries according to season; the spring giving 31 recoveries more than the winter months, the summer 22 more than the spring, and the autumn 29 more than the summer months. By this it appears that the winter months furnish the smallest number of recoveries, while the autumnal months furnish the largest, or 82 more than the winter months. The recoveries then which take place during the winter amount to only 19 per cent., while those of the autumn rise to nearly 31 per cent.

How can this great difference be accounted for? *In the first place*, there is the smallest number of patients in the Asylum during the latter part of the autumnal and the whole of the winter months, and the largest during the summer months. *Secondly* — as the patients who recover usually remain in the Asylum from three to five months, the greater proportion of recoveries in the autumn corresponds with the increased number of admissions in the warm season; so, the next largest proportion of recoveries during the summer, corresponds with the numerous admissions in the spring. The spring gives a larger number of recoveries than the winter, because those who get well during the latter season usually remain in the Asylum until spring. *Thirdly* — another reason for the great increase of recoveries during the summer and autumn is, that at those seasons, insanity is a more acute disease, and its causes, are more generally physical and remediable than those occurring at other periods of the year.

Besides considerable influence may be attributed to the relaxing effects of warm weather, and to the increased evaporation from the surface, which takes place during summer.

TABLE OF DEATHS.

Of 160 patients who died in the Asylum, the diseases of 117 only are on register, and are as follows:—

Asthenia, ...	19	Dropsy, ...	3
Phthisis, ...	17	Concussion of brain, ...	2
Delirium a potu, ...	10	Cholera morbus, ...	2
Fever, ...	9	Cholera spasmodic, ...	2
Apoplexy, ...	9	Strangulation occurring to par-	
Epilepsy, ...	8	alytics while eating, ...	2
Palsy, ...	8	Abscess of liver, ...	1
Inflammation and softening of		Abscess lumbar, ...	1
brain, ...	5	Erysipelas, ...	1
Inflammation of bowels, ...	5	Inflammation of lungs, ...	1
Dysentery, ...	4	Starvation, ...	1
Suicide, ...	4		—
Diarrhœa, ...	3	Total, ...	117

The term *asthenia*, has been used to designate that state of exhaustion or loss of vital force, which follows long continued and excessive mental and nervous excitement, and into which the insane often fall. As shown by the above table, more die in this state than by any single disease. But if all the diseases of the brain, (including apoplexy, palsy, epilepsy, inflammation, and softening,) be added together, it will be found that a large number have been destroyed by them, than by the diseases of any other system. They amount to 32 in 117 deaths.

TABLE OF DEATHS ACCORDING TO MONTHS, FROM 1825 TO 1836 INCLUSIVE.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1825	0	0	0	0	1	0	1	0	0	0	1	0
1826	3	1	0	1	0	0	1	1	1	0	2	0
1827	2	1	0	1	2	0	0	1	1	0	0	1
1828	1	1	1	2	0	2	2	1	2	0	2	0
1829	2	1	1	0	0	0	0	0	2	0	1	2
1830	1	0	0	1	0	2	0	0	1	0	1	1
1831	1	2	0	2	0	0	1	1	1	3	3	4
1832	3	1	1	1	0	0	3	3	1	0	1	1
1833	0	1	0	1	0	1	2	3	2	0	0	1
1834	2	2	0	0	1	1	1	1	3	1	2	0
1835	2	1	0	0	2	2	0	0	2	1	0	3
1836	0	1	1	1	0	1	0	2	2	4	2	0
	17	12	4	10	6	9	11	13	18	9	15	13

The deaths, when arranged according to seasons, give the following results:—

Spring,	.	.	.	.	20 Deaths.
Summer,	.	.	.	.	33 „
Autumn,	.	.	.	.	42 „
Winter,	.	.	.	.	42 „

Showing the lowest degree of mortality in the Spring, and the highest in Winter and Autumn.

TABLE OF AVERAGE NUMBER OF PATIENTS IN THE BLOOMINGDALE ASYLUM,
THE NUMBER OF DEATHS, AND THE PER CENT. OF DEATHS.

The fractions here given are not the exact sum—they are only about what the per cent. amounts to.

Year.	Average number of patients in the Asylum during each year.	Deaths.	Per cent. of Deaths.	Per cent. reckoned according to the whole number of patients in the Asylum, from the beginning to the end of the year.
1821	74	2	$2\frac{3}{4}$	$1\frac{2}{3}$
1822	86	5	5	3
1823	101	5	5	$2\frac{1}{4}$
1824	116	11	$9\frac{1}{2}$	5
1825	119	3	$2\frac{1}{2}$	$1\frac{1}{9}$
1826	88	11	$12\frac{1}{2}$	5
1827	90	9	10	4
1828	90	13	$14\frac{1}{2}$	6
1829	83	9	$10\frac{7}{8}$	5
1830	89	7	$7\frac{7}{8}$	$3\frac{1}{4}$
1831	97	19	$19\frac{1}{2}$	8
1832	96	15	$15\frac{2}{3}$	7
1833	107	10	$9\frac{1}{3}$	$4\frac{1}{2}$
1834	120	14	$11\frac{2}{3}$	$6\frac{1}{4}$
1835	136	13	$9\frac{1}{2}$	$5\frac{1}{3}$
1836	153	14	$9\frac{1}{7}$	$5\frac{1}{4}$

The striking difference in the proportion of deaths, as exhibited by the above table, is not easily explained. Though comparatively few lunatics fall victims to the diseases that occasionally prevail in the neighbourhood of the Asylum; yet, these diseases undoubtedly influence, very materially, their state of health, and cause them to sink more rapidly under the various organic or latent affections under which they may be labouring. On the other hand, the diseases more particularly referred to here, (intermittent and remittent fevers,) not unfrequently exert a most salutary influence in old cases of insanity. Modifying and improving some, and entirely restoring others. Hence, it is not an uncommon practice at the Asylum, when a patient with a strong constitution is attacked with intermittent fever, without local congestion or other organic difficulty, to leave him with careful watching, to the influence of his periodical disease. Several cases of mania of long standing have, in this way, been entirely cured.

TABLE SHOWING THE NUMBER OF DEATHS IN EACH SEX.

Year.	Males.	Females.
1821	0	2
1822	4	1
1823	2	3
1824	10	1
1825	1	2
1826	9	2
1827	5	4
1828	8	5
1829	7	2
1830	6	1
1831	13	6
1832	11	4
1833	9	1
1834	10	4
1835	8	5
1836	8	6
	111	49
	49	
	160	

Thus 160 deaths occurring among 2037 persons admitted into the Bloomingdale Asylum, in the course of 16 years, makes rather less than 8 per cent.

111 deaths occurring among 1346 male patients, gives $8\frac{1}{4}$ per cent.

49 deaths occurring among 691 female patients, gives about $7\frac{1}{11}$ per cent.

Calculated in this way, the mortality among females is more than one per cent., or one-eighth less than among male lunatics.

Pathological anatomy, it may be added, has not been neglected. *Post-mortem* examinations were resorted to, whenever it was practicable to make them. But as the majority of patients in the Bloomingdale Asylum are supported by friends who take a lively interest in every thing that relates to them, and who participate in the general prejudice against dissection, autopsies were more rare than the writer desired, it having been his wish to procure all the information that could be collected relative to an obscure and interesting disease.

As a proper use of the inductive method requires a large mass of facts, a sufficient number has not been collected to establish any new principle, or even materially to strengthen or weaken any opinion hitherto advanced. The facts collected will therefore be reserved for some future occasion, or until a sufficient number of others be added to give them some claim to attention.

Both the object and necessary limits of this paper preclude a consideration of the nature and treatment of insanity, but we cannot bring it to a close without adverting, in a general manner, to the management of the institution, the annals of which are here set forth.

In the admission of patients into the Asylum, the governors have not restricted themselves to any form, degree, or stage of insanity. Believing that the existence of mental derangement, in any of its varieties, constitutes, of itself, a sufficient claim to the care and protection of the institution, they have hitherto received, without reserve, idiotic and incurable, as well as curable patients, to participate in its benefits. This indiscriminate admission, though unfavourable to the reputation of the institution by diminishing the proportion of recoveries, the Governors have thought the interests of humanity required, because there is no other establishment in the State for the reception of the imbecile and incurable, and because these classes often demand that kind of moral management which can nowhere else be so efficiently practised.

The six governors, to whom is delegated the charge of the Bloomingtondale Asylum, direct its fiscal concerns and supervise its moral management. Under their auspices the treatment of the insane is strictly mild and parental. Not to speak of stripes and blows, which may be coupled with punishment for witchcraft as one of the relics of barbarism, the use of chains has been abolished, and it is long since there has been such a thing as a straight-jacket in the establishment. The utmost extent of freedom, consistent with safety, has been found the best substitute for these means of restraint.

The same enlightened spirit that first suggested the foundation of an institution on a scale hitherto unattempted in this country, for the exclusive treatment of insanity, soon led to the adoption of a liberal system of moral management. Whatever

was found to act favourably on the patient, through the medium of his feelings or intellect, has, from time to time, been brought into use.

Classification, it is now generally conceded, is the first step in the treatment of the insane, where large numbers are collected together. By classification is not to be understood a division of the insane agreeable to the nosological arrangement in books, but a grouping of them according as they are violent or tranquil, convalescent or under treatment, of good or bad habits. It is such an entire separation of the different classes, that the one has not the slightest intercourse with the other without permission. The classification at Bloomingdale, though at first imperfect, has, by various modifications of the original building, and by the construction of lodges for the violent, been rendered much more complete.

Various exercises and amusements adapted to the tastes, habits, and condition of the patients have been introduced. Among these are riding in carriages and on horseback, walking, both singly and in parties, gymnastics, ninepins, quoits, the care of domestic animals, draughts, chess, back-gammon, dominoes, bagatelle, battledore, the graces, painting, ornamental and plain needlework, &c. &c.

Social intercourse, under suitable restrictions, is promoted by assembling all the convalescent and well-behaved patients at the same table, and by means of evening parties, at which music and dancing are the chief sources of enjoyment.

A reading room furnished with papers and periodicals, and a circulating library, are found to be among the most useful appendages of the institution, and serve to lessen the ennui attendant on a life of restriction.

Religious service was introduced into the Bloomingdale Asylum as early as 1832. Independent of the more lasting and important influence of this exercise, and viewing it simply as a moral agent in the treatment of insanity, as promoting order, as aiding self-control, as reviving long-neglected habits, or as continuing those that have been well established, it is found to exert the most salutary effects.

Though many of the female patients are advantageously employed at housework, needlework, &c., and some of the men

are induced to labour in the garden and on the farm or pleasure-grounds belonging to the establishment, useful occupation is yet, it must be confessed, an important desideratum.

Chronic cases of insanity in which there exist no palpable symptoms of bodily disorder, can seldom be benefited by treatment purely medicinal. Patients in this stage of the disease, if left to themselves, fall into a state of disgusting apathy, or mischievous and destructive restlessness. The only treatment that remains for them is pointed out by the rules of Hygiene, and consists in a proper observance of diet, clothing, warmth, cleanliness, and a due exercise of mind and body.

In the Bloomingdale and other American asylums, though many patients of the working classes are engaged in useful labour, this method of treatment has not been sufficiently extended. In establishments like that at Bloomingdale, where all the various classes of society are admitted, it will perhaps be impracticable to furnish each class with its appropriate occupation, but there is nothing extravagant in the belief that, in pauper institutions, suitable occupations may be furnished for all, and that a very large proportion of their inmates may be induced to follow them.

Report of Cases of Un-united Fracture, treated at the New-York Hospital. By JOHN S. HEARD, M.D., late House Surgeon.

THE chief object of the following report is to offer to the profession an account of a new mode of treating un-united fractures of the extremities, first practised in the New-York Hospital, and, so far as my knowledge extends, still confined to the practice of that institution. I shall at the same time, however, detail such cases as were treated by the more common methods during my connection with the Hospital, and allude to the different modes of practice recommended by other surgeons.

The *causes* of non-union after fractures are either constitutional or local. Among the former may be classed whatever

tends to produce a greater or less degree of general *debility*, the influence of which is felt in the local lesion,—such as severe and extensive injuries, by which the vital forces are tested beyond their powers, and are unable to repair all the injuries received,—organic diseases, as phthisis, chronic dysentery;—or old age.

Among the *local* causes, may be enumerated severe injury of the limb itself, by which the principal vessels are destroyed, or the bone so comminuted, and the soft parts so lacerated, as to prevent reunion; disease of the bone itself; want of co-aptation; of the fragments;—arising from either the interposition of a strip of muscle, the presence of a portion of carious bone, or of some foreign body, as a bullet, or the imperfect reduction of the fracture in the first instance;—want of perfect quietude of the parts for a sufficient length of time, owing to either the use of inadequate mechanical means, or the careless and unscientific application of those which are sufficient; the too firm or too long application of bandages, preventing, by the compression they produce, the requisite degree of vascular action. (The too long-continued use of cold applications may possibly produce the same result.)

Condition of an un-united fracture.—Upon examining an un-united fracture, it will generally be found that there has been some attempt at union in the deposit of bony matter; but this may, in an old case, have been absorbed. The extremities of the fragments become enlarged and rounded, and a band, of a nature between ligament and cartilage, unites them. Or again, the extremity of one fragment may be rounded, while that of the other is converted into a cup-like cavity, into which the former is received and plays, the surrounding cellular tissue being converted by condensation into a sort of capsular ligament.

Objects of treatment.—In order that perfect consolidation and reunion of a fractured bone should take place, the following conditions must be fulfilled:

1. The vascularity of the fragments must be raised to that degree above the natural standard, at which ossific matter is deposited.
2. The fragments must be kept in co-aptation in a state of perfect quietude.

Now the object of all the different plans proposed and prac-

tised, is to reproduce this required degree of vascularity, to bring the parts as near as possible into the state of a recent fracture, and then, by the application of mechanical means, to keep the parts at rest in co-aptation.

Different methods of treatment.—*I. Blisters.* Blisters have been applied over the seat of fracture, with a hope that the irritation produced by them, extending sufficiently deep, would produce the requisite degree of vascularity. We are not aware of the success of this treatment, but should think it would be small.

II. Friction of the extremities.—The extremities of the fragments have been rubbed sharply against each other. This seems to have been the practice among the older surgeons. It is mentioned by Celsus. It has been occasionally successful.

III. Rest combined with local pressure. Mr. Amesbury, after applying himself to the study of recent fractures, turned his attention to those cases in which no union had taken place; and conceiving that one of the principal causes of non-union arose from the insufficiency of the ordinary apparatus, treated a number of cases successfully, by means of an apparatus invented by himself, in which the fragments are kept at rest in co-aptation, pressure being made at the seat of fracture by means of weights and straps. It is on this principle that we think the immovable apparatus will be an important means of treating these tedious cases. In a case of un-united fracture of the os femoris in St. Bartholomew's Hospital, which was of twenty-one weeks standing, and had resisted all the usual means, firm bony union was effected by the application of a tourniquet around the limb, at the seat of fracture.

IV. Salivation. Mr. Colles of Dublin having noticed in some patients who had ununited fractures, but were under treatment for other diseases, and in which mercury was administered, that union took place during salivation, proposed the plan to Mr. Bransby Cooper, who adopted it with success. Mr. Cooper reports the case in the second volume of Guy's Hospital Reports, from which we shall condense it: "A young woman, aged 28, of healthy appearance, and ruddy complexion, was admitted into Guy's Hospital, March 9th, 1836, with an un-united

fracture of the left os brachii, just below the insertion of the dettoid muscle. Six months previous she was thrown from a cart, and upon rising from the ground, discovered that she had lost the use of her arm. She immediately applied to a surgeon, who treated the fracture properly and judiciously. But, in about eight weeks after the accident, upon removing the splints, it was discovered that no union had taken place. The splints were replaced, and the arm firmly bound to the side, in order to prevent any degree of motion. The apparatus was worn for a month without being removed, and notwithstanding her strict adherence to every instruction of the surgeon, as to the maintenance of perfect rest, it was then found that no union had taken place. The surgeon therefore re-applied the apparatus, with the addition of an iron splint, extending from the outer side of the os brachii to the wrist, and bent at an acute angle; the arm was, as before, bound to the side. This plan was persevered in for a month; but with no better effect. The surgeon, still unwilling to give up the case in despair, made one other attempt, by applying a bandage tightly round the arm, and placing wooden splints over it, compressed them to the utmost the patient could bear, to which she submitted patiently for two months, at the expiration of which time the fractured extremities were as movable as ever. Upon the 9th of March she came under Mr. Cooper's care, who discovered the two fractured extremities to be in juxta-position, but without any union. The two portions of bone moved readily upon each other, but without producing anything approaching to the sensation of crepitus. On the contrary, the mobility of the part conveyed the impression of the formation of a supernumerary joint, and the muscles were also capable of producing a degree of voluntary motion. Mr. Cooper proposed the introduction of a seton, and the operation was performed on the 23d of March, having previously attempted, for ten days, the effect of forcibly rubbing the bones against each other, without avail. The seton was worn ten weeks, but the irritation which, for the first few days, held out a prospect of success, soon subsided, and proved ultimately to have led to no happier result than any of the former attempts, although it was observed that there was rather less motion between the fragments than had existed prior to its in-

troduction. A bandage dipped in a composition of egg and flour was firmly bound around the arm, the application of which preserved, in the most perfect manner, an immovable condition of the limb. This was worn six weeks, being so applied as to enclose the shoulder and elbow, and to press, forcibly, the two broken extremities of the bone together; but still without effect. As a last resource, Mr. Cooper ordered, on the 12th of June, the whole limb to be enclosed in plaster of Paris, and the patient to remain in the recumbent posture. The plaster was allowed to remain until July 12th, when, upon removing it, the arm was found in exactly the former condition. It was at this time that Mr. Colles suggested the use of mercury to Mr. Cooper, who put the patient under the use of *hyd. c. creta grs. iv. ter in die*, applying, at the same time, a well padded leathern girth around the arm, at the seat of fracture. Ptyalism was induced in four days, and, on the sixth, the mercury was discontinued. The leathern girth was worn for a month, and, upon its removal, Mr. Cooper was gratified in finding perfect union; affording satisfactory proof that mercury had produced an altered action in the capillaries of the affected part, and exemplifying the powerful alterative action of the metal.

V. Seton. Dr. Physick, struck with the severity of Mr. White's method, (to be presently noticed,) and believing it not devoid of danger, proposed the introduction of a seton between the extremities of the fragments, and was successful in causing the firm re-union of a fractured os brachii, which had resisted all the usual treatment for twenty months. The seton was kept in nearly five months. Dr. Physick thought that the seton would be most successful in the upper extremity and in the leg, and if a limited experience would allow us to express an opinion, it would be in confirmation of his. Mr. Liston, entertaining opinions somewhat at variance with those held by Dr. Physick as regards the mode of operation, and the length of time the seton should be allowed to remain,—in a clinical lecture in the North London Hospital, made these remarks: "This operation, (the introduction of the seton,) is more successful than any of the others, and would, I believe, be pretty generally successful, if the surrounding soft parts were a good deal torn up, if the periosteum were a good deal excited, and if

a seton were inserted to keep up the action for a certain period. Generally the seton has been kept in for a great many weeks, or even months, until its influence has in a great degree failed, has, in fact, had the contrary effect to that intended, has weakened the deep-seated action. Retaining it for a long time is attended with considerable discharge, which is unfavourable to the process of healing; which puts the soft parts in the situation of a compound fracture, which is by no means desirable. I would have you cut down upon the bone, avoiding the vessels and nerves of importance, cutting the soft parts as little as possible. Introduce an instrument between the ends of the broken bone, turn it well around, and insert the seton, not caring that it should go exactly between the ends of the bone; I would rather it should pass over the surface of the bone, perhaps, one on each side; shake the limb a good deal about, move the instrument roughly."

VI. Introduction of a silver wire between the fragments. —

Dr. Somme, principal surgeon and professor in the Civil Hospital at Antwerp, succeeded in effecting bony union in an ununited fracture of the os femoris, 5 months after the injury was received, by passing a silver wire between the ends of the fractured bone. He thus describes the operation: "The patient being placed upon his back, and supported, I passed a long trocar and canula at first downward, on the inside of the upper fragment, and made it pierce the skin behind, and a little to the outside. The trocar was then withdrawn, and a silver wire passed through the canula, and out at the posterior opening. The canula was then withdrawn and replaced upon the trocar. They were again introduced above, and on the outside of the lower fragment, and made to pass out at the same opening behind. The trocar being withdrawn, the other end of the wire was passed through the canula, so that both ends were in contact behind, leaving a loop in front. I then made an incision from one orifice to the other made by the trocar, and drawing the extremities of the wire through the wound, brought the loop between the fractured ends of the bone, and approximated the edges of the wound with sticking plaster." The limb was now placed in a wooden box of sufficient length to receive the thigh and leg, and of such a width as to act as lateral splints. At

each dressing the wire was drawn down so as to depress the loop more and more into the flesh. Six weeks after the introduction of the wire, the union was distinct, and shortly after the wire was removed, there being no apparent shortening of the limb, and the patient using it as well as the other.

VII. Injection of stimulating liquids between the extremities.—Dr. Hulse of the United States Navy, proposed, and practised successfully, another modification of the treatment by the seton. A sailor, aged 25 years, fell from the maintop of the *Vandalia*, and fractured the os brachii about 4 inches above the olecranon process, the lower fragment protruding; the fracture was properly treated by the surgeon of the vessel, but no union taking place, he entered the Naval Hospital at Pensacola, two months after the date of the fracture. Dr. Hulse at first thought of introducing a seton, but subsequently determined upon a course somewhat similar, viz.: the daily injection of a stimulating fluid into the wound which still remained fistulous. He used at first Port wine and water, next salt and water, and finally, a solution of sulph. cupri. During the treatment a portion of necrosed bone was removed; firm union was effected in 2 months.

VIII. Application of caustics to the extremities.—The fragments have been exposed by an incision made down upon them, and various caustic substances applied to their extremities.

IX. Sawing off the extremities.—Mr. White of Manchester, is the projector of a plan of treatment, in which, after exposing the fragments by an incision made down upon the bone, their extremities are removed by a saw. Mr. White first practised this operation in a case of un-united fracture of the tibia which had remained movable for many months. Firm union took place in 12 weeks. He was also successful in a case of fractured os brachii, which had remained un-united for 6 months.

Dr. Inglis, of Edinburgh, was also successful in bringing about osseous union in an un-united fracture of the tibia of 9 months standing, by removing the extremities of the fragments by the trephine and saw. Union took place in 10 weeks. Mr. G. Rowland, met with similar success in a case of fractured os femoris, in which no union had taken place 5 months after the occurrence of fracture.

X. Removing the extremities and connecting the fragments by silver wire.—All these different methods having occasionally failed in effecting bony union,—it occurred to *Dr. J. Kearny Rodgers*, one of the surgeons of the *New-York Hospital*, that if, after removing the extremities of the fragments and exciting their periosteum, he could keep them in apposition for a certain period,—firm osseous union would ensue. He accordingly after sawing off the extremities of the fragments, drilled a hole in the end of each, and passing a silver wire through, drew the bones together, and kept them in co-aptation until firm union was effected. Subsequently, *Drs. Mott and Cheesman*, colleagues of *Dr. Rodgers*, were likewise successful in inducing bony union by the same operation. This operation has not, we believe, been adopted in any other place than the *New-York Hospital*. Indeed, the only notice of it that I have been able to meet with, is in a report of a clinical lecture by *Mr. Liston*, in which he makes these remarks: “A proposal has, I think, been made, to denude the ends of the bones, drill holes in them, and connect them by a silver wire. It is too artificial a mode of proceeding, and I should fear, that from exposure and bruising of the ends necessary for accomplishing the object, (for perforation cannot be made unless by denuding the bone freely, and holding it securely by some contrivance until the object is accomplished,) that necrosis, instead of union, would be apt to follow.” Now, what *Mr. Liston* means by “too artificial a mode of proceeding,” is not very apparent: in what is it more artificial than *Mr. White’s* method? In the simple passing of a silver wire: and is an operation, although successful, to be abandoned because it is artificial? Surely this rule would have a very limited application in surgery. And as regards “necrosis instead of union,” being more likely to follow, it will be sufficient to state, that this operation has hitherto never failed of success. And are we to refuse to adopt a sure plan of treatment, although it be severe, for one which, though less so, still, occasionally, is of no avail?

XI. Amputation.—When from failure of any one or more of the above plans, or the unwillingness of the patient to submit to them, there is no alternative but to allow the patient to carry his useless limb, or to amputate it.

Case I.—GEORGE WESTERFIELD, aged 15, admitted into the New-York Hospital, under Dr. Rodgers, July 25. with an un-united fracture of the right os brachii, about two inches above the elbow joint.

THIS accident was the result of a limb of a tree falling upon his arm in Ohio, in December, 1824. From his account, it appears that a medical man reduced the fracture immediately, and placed splints on the arm, which was borne in a sling. At the expiration of twelve days, the dressings were removed, and the union, which he seems to have expected, not having taken place, the ends of the fractured bone were rubbed together, and the splints re-applied. This treatment was persevered in several months. In June, 1825, a seton was passed between the ends of the bone, and withdrawn in a week; splints were worn for 4 weeks, but no union ensued. He remained without treatment from this time until his arrival in New-York, in June, 1826; in the latter end of June, a seton was passed by a surgeon of this city, and retained for six months, motion being prevented by splints applied to the arm. The seton having been fairly tried, and removed without any beneficial result, the patient almost despaired of ever recovering the use of his arm, but was willing to submit to any expedient which might be proposed, likely to bring about union. It appeared to Dr. Rodgers, that but one other mode offered any prospect of success, and that was Mr. White's plan of sawing off the ends of the bone, and reducing the parts to the state of a recent compound fracture. On the 31st of July, Dr. R. made an incision 3 inches in length, through the integuments of the arm, on the outer edge of the biceps muscle, down to the bone. The lower end was easily turned out of the wound, and half an inch sawed off. The upper end could not be sawed off in the same way; but having guarded the soft parts by a thin slip of wood passed down on each side of the bone, about half an inch was removed by a circular saw. It being found impossible to bring the ends of the bone in contact, in consequence of a slip of muscle passing between them, this was divided; but the fragments, although placed in apposition, soon regained their former bearings an inch and a half asunder. Apprehensive that he should be foiled if the fragments were allowed to remain thus far apart, Dr. R. drilled a hole into the medullary cavity through the shell of each end; through these holes a silver wire was passed, and the ends of the bone retained in co-aptation. The ends of the wire were drawn through a canula, which remained in the wound. The os brachii was much softer than natural, and it was feared that this state would prevent any ossific deposit. The wound was dressed with adhesive straps; and the arm enveloped in splints, was placed on a right angled splint properly hollowed out.

August 15th. The canula fell from the wound with the loop entire, so that the bone must have broken away; the bones however continued in proper position; not expecting bony union for some time, the arm was not examined for a month; during this time the wound had almost healed.

October 8th. 69 days after the operation, Dr. Rodgers was gratified to find that the bone had united, but he was unwilling to test its strength by force.

October 16th. On examination to-day the limb was found to have united perfectly. The patient was not allowed to move from his bed for two months after the operation.

December 3d. The patient was presented to the clinical class, with every motion of the arm perfectly regained, the os brachii being two inches shorter than its fellow.

Dr. Mott was, likewise, successful in bringing about union in a case of un-united fracture of the os brachii by this method, but I am unable to present any authentic report of this case.

Dr. Cheesman, by adopting this operation, effected osseous union in a case of fractured os brachii, of 5 months duration; firm union ensued in 3 months.

Case II.—CHARLES GRILL, born in Germany, aged 26, a cutler, was admitted into the New-York Hospital, September 28th, 1838, with a simple fracture of the radius of the right forearm, about 2 inches above the wrist joint.

THE injury was caused by his hand being caught in machinery and bent forcibly back. There was considerable contusion of the whole forearm, and some laceration of the hand. The fracture of the radius was very oblique, and the lower end of the upper fragment projected nearly through the integuments. The fracture was reduced, and the patient being placed in bed, the arm was laid in a flexed position on a pillow, covered with oil silk, and lot. evap. applied. As soon as the state of the arm would allow, the requisite pads and splints were applied, and the arm supported in a sling. At the expiration of 4 weeks from the application of the splints, they were removed, but no union had taken place. It was now suggested that a strip of muscle interposed between the fragments, was the cause of non-union.

A splint, with a hand piece setting off from the body of the splint at an angle of about 110° , was now applied upon the palmar side of the forearm, in order to elevate the lower fragment. The interosseous pads being only applied between the ulna and this lower fragment, the usual splint was placed on the dorsal side. The arm was thus supported in a sling for six weeks; at the expiration of which period, upon removing the apparatus, there was still no union. The same apparatus was replaced and the patient put under the use of mercury, but it produced profuse diuresis and was discontinued. The splints were allowed to remain applied until January 10th, when Dr. Rodgers made an incision about $2\frac{1}{2}$ inches in length, over the seat of fracture on the palmar side of the forearm; upon exposing the fragments, the radial artery was found running between them; the lower fragment was drawn down to the ulna, while the upper one was separated near an inch from it, a slip of the extensor carpi radialis muscle intervening. The radial artery was divided and secured at both extremities, the intervening muscle was severed, and the

ends of the bone removed with the bone pliers. A hole was now drilled into each extremity, and a silver wire being passed through, the bones were approximated by twisting the wire, the end of which was allowed to hang from the wound. The edges of the wound being brought together by adhesive straps, the ordinary pads and splints were applied, and the arm suspended in a sling. A slight attack of erysipelas occurring, required the confinement of the patient to bed and the removal of the splints; upon the subsidence of the erysipelas in a few days, the splints were re-applied.

February 2d. The wire came away to-day, the loop being entire. The splints and bandages were continued until April 2d, when, upon removing them, the union was found to be perfect. He remained in the hospital, using passive motion, until April 15th.

Case III.—MATTHIAS LUDLUM, born in New-York, aged 28, an engineer, was admitted into the New-York Hospital, May 12th, 1838.

THIS man, about an hour previous, while tending his steam-engine, was caught by the skirt of his coat on the fly-wheel, which was making about 250 revolutions per minute. He was forcibly carried around, and, at every revolution of the wheel, was thrown against the brick arch above, and on the stone floor below. His cries soon brought a number of persons, but they were unacquainted with the management of the engine, and he was obliged to give the necessary directions for the shutting off the steam. He was at length removed, having been carried round between 200 and 300 times; he was perfectly sensible, and says he felt little or no pain. He was immediately conveyed to the hospital, and, when I first saw him, his condition was as follows: perfectly sensible — pulse small and feeble — surface cool, but not cold — a compound fracture of the bones of the forearm, just above the wrist joint — a fracture of the right os femoris about its middle, — a compound fracture of both bones of the left leg, just below the knee joint — severe and extensive laceration and contusion of the soft parts of both legs, more particularly of the left — several lacerated wounds of the scalp; indeed no part of his body seemed to have escaped severe contusion.

External warmth was immediately applied, and internally he had warm brandy toddy.

This patient presented a rare combination of circumstances, to which, in all probability, is to be ascribed his not sinking beneath the primary shock of the injury. To a mind rendered perfectly tranquil and resigned to the result by a lively faith in the Christian religion, he added a constitution whose powers, naturally strong, had been strengthened by a life of absolute temperance. This was a combination rare in a patient the subject of so severe an injury, and, especially, in an hospital patient.

About two hours after his admission, Dr. Stevens saw the patient and directed the ordinary apparatus of the house to be applied. Accordingly the right inferior extremity was loosely enveloped in a many-tailed bandage, and, the fracture being reduced, was placed on a double inclined plane, and the foot firmly

secured to the foot-piece. The left limb was treated in a similar way, with the exception of the fracture-box being extended instead of bent. A broad flat splint, well padded, was placed upon the palmar side of the left forearm, which was loosely bandaged to it; the wounds were dressed with adhesive straps and lint, and an anodyne evaporating lotion applied to the fractured limbs. On the fifth day he was transferred into one of Amesbury's fracture beds, defæcation being attended with great pain and considerable movement of his body on the common bed of the ward. At this time the fracture-boxes were removed from the limb, the fracture-bed fulfilling all the indications, with the aid of splints. Erysipelas now attacked the right leg, which had been severely contused, and spreading to the thigh, it became necessary to remove *all* the splints and bandages, for several weeks. About the middle of June, 4 curved splints, well padded, were applied to the fractured os femoris, but it was impossible to make any permanent extension from the inflamed condition of the foot, in which abscesses formed. The form of the bed, however, acted so as to produce, in some measure, the desired extension.

Towards the latter end of June, the foot being healed, Amesbury's splint for fractures of the thigh, was applied, and allowed to remain on until the middle of October. The fracture of the leg united in eight weeks; union also took place in the bones of the forearm.

About the middle of October, the Amesbury apparatus was removed, having been applied 14 weeks, but no union had taken place, and the bones were as movable now as at the time of admission, and the patient much reduced by the profuse suppuration. A roller was firmly applied to the limb from the toes to the groin, and a felt splint, moulded to the thigh, was bound firmly on by straps. This apparatus was kept applied until the beginning of December — but no union ensued. At this time the immovable apparatus was applied, and a mercurial course instituted. This plan was persevered in until the beginning of February, (salivation having occurred in the mean time,) but with no more success.

It was now determined in consultation to remove the ends of the fragments and connect them by a silver wire.

February 9th, 1839. Nine months after the occurrence of the fracture, the operation was performed by Dr. Cheesman. He commenced by making an incision about six inches in length, over the upper fragment on the outer side of the thigh, by which the bone was exposed, and, with considerable difficulty, turned out about an inch, which was then removed with a saw, and a hole drilled through the extremity. The leg was now carried across the other, and thus the lower fragment made to form a prominence beneath the integuments. A catlin was then passed from the lower fragment through the vastus externus muscle, and after much difficulty, and with considerable pain to the patient, the extremity of the bone was thrust out and removed, and a hole likewise drilled through this extremity — a silver wire, of about the thickness of an ordinary probe, was now passed through these holes, and powerful extension and counter-extension being made by the compound pulleys, the fragments were brought in co-aptation and kept in apposition by twisting the wire.

The wound was brought together by suture and adhesive straps, the end of the wire hanging from the wound. The ends of the bone had passed one another about two inches, the upper fragment looking outward and downward, and the lower inward and upward. The operation occupied one hour and a half.

The patient was removed from the operating-table to a firm mattress, with a hole in it, so as to allow the calls of nature to be obeyed without movement of his body. A tin splint, of sufficient length to reach from the crest of the ilium to the ankle, and of such a width as to encircle two-thirds of the limb, well padded, and lined with oil silk, received the limb. There was a portion of this splint, about six inches square, opposite the wound, so arranged as to move on hinges, permitting the necessary dressing to be made without disturbing the limb. An attack of erysipelas followed the operation, with the exception of which the patient did well. The wire having nearly made its way out, was removed April 19th; the bone apparently united.

The limb remained in the splint until May 15th, when it was found that perfect union had taken place, the limb being two inches shorter than the opposite one. He remained in the Hospital until July 25th, when he was removed into the country.

Case IV.—ABEL SNYDER, born in New-York, aged 19, a private in the United States army, was admitted into the New-York Hospital, May 10th, 1838.

ABOUT six months previous, while on duty in Florida, his horse ran away with him, and dashed him against a tree, by which his left os femoris was fractured about the middle. A surgeon applied a number of small splints to the thigh, but from the press of business of the campaign, or some other cause, did not visit him but two or three times, and upon removal of the splints it was found that no union had taken place. He remained without treatment until the period of his admission into the Hospital, when his condition was as follows: the limb was four inches shorter than its fellow, and greatly deformed, the thigh being bent outwards, so as to form a considerable curve; the heel resting upon the instep of the opposite foot; great mobility at seat of fracture, the fragments appearing to be connected by a ligamentous union. Shortly after his admission, two separate attempts were made by Doctors Stevens and Cheesman to break up this union, and reduce the limb to its proper axis. For this purpose, a stout splint, one inch in thickness, and of sufficient length to reach from the perinæum to below the knee, was placed upon the inner side of the thigh; the upper end of this splint was formed into a crutch, and the whole was firmly padded, with the exception of the middle third. A pad was then placed over the projection formed by the bones on the outer side of the thigh, and a screw put upon the limb, but though the limb could be brought to its proper direction, and considerably elongated, it regained its former condition immediately upon removing the screw. Dr. Cheesman now directed Physick's modification of Dessault's long splint to be applied to the limb; a broad strap being

firmly buckled around the apparatus, at the seat of fracture, the extension was increased every five or six days. This apparatus was kept applied two months, and upon removing it, it was discovered that firm union had taken place, and that the limb was only one inch and three-quarters shorter than the opposite one, the patient having as perfect use of it as of the other.

Case V.—JOHN CUMMINGS, born in Scotland, aged 38, a seaman, was admitted into the New-York Hospital, under Dr. Hoffman, April 1st, 1839.

IN October, 1838, while at sea, he fell from the topsail yard on deck, a distance of 20 feet, by which accident the left os femoris was fractured about its middle. Being on board a common trading vessel, and there being no surgeon on board, he received no treatment other than being kept in bed for two months. Upon admission, the limb was found to be shortened two inches, and considerably deformed, the upper fragment forming quite a prominence beneath the soft parts of the outer side of the thigh, while the lower one was carried inwards and downwards. There seemed to have been no attempt at union, the part allowing of a great degree of motion. On the 8th of April, after making powerful extension of the limb, a starched bandage was applied from the toes to the groin, and over this a second. Three pasteboard splints were next moulded to the thigh, the outer one extending from below the knee to the crest of the ilium; and over these, three more starched bandages were applied. The patient was kept in bed with this apparatus applied until the beginning of July, at which time, upon removing it, it was ascertained that union had taken place. But the patient thinking the limb as strong as the other, was careless in his movements, and, unfortunately, again fractured it. The starched apparatus was again applied, and a mercurial course instituted, under which treatment he continues at this date. (August.)

Case VI.—MICHAEL POWELL, a healthy Irish labourer, aged 28, was admitted into New-York Hospital, March 31st, 1838.

ON the 5th of January, while engaged at work on the Croton Aqueduct, his left os femoris was fractured by a blow of a stone from a blast. A medical man in the vicinity placed a number of small splints on the thigh, which were kept loosely applied for seven weeks, at the expiration of which time he was allowed to get up from his bed and walk, in attempting which the union gave way. He remained without further treatment until the time of his admission into the Hospital, when the following was his condition: a fracture of left os femoris, just below the trochanter major; limb two inches shorter than the opposite one; great mobility of the parts. The end of the fragments were forcibly rubbed against each other, and the patient placed on Amesbury's fracture bed; four curved splints, well padded, were secured to the thigh, whose length had been increased one inch by extension; the foot was securely attached to the foot-piece. This plan of treatment was persevered in for three months, without bony union being effected. He was now allowed to walk about with the aid of his crutches for several

days, with the hope of thereby exciting vascular action in the fragments. He was then again placed in bed, and Physick's modification of Dessault's splint for fractures of the thigh applied to the limb; at the same time mercury was given, and salivation twice induced. This course, continued for twelve weeks, led to no happier result. On September 16th, it was determined, in consultation, to introduce a seton between the extremities of the fragments. Accordingly, Dr. Cheesman made an incision, about three inches in length, on the upper and outer part of the thigh, over the seat of fracture, down to the bone. A hole was then bored through the extremity of the lower fragment, through which a seton-needle, armed with a skein of coarse silk, was passed, and made to pierce the integuments on the inner and under side of the thigh; the wound was approximated by adhesive straps, and the patient placed on Amesbury's fracture-bed. A smart attack of irritative fever, attended with profuse suppuration from the course of the seton, prostrated the patient exceedingly, and demanded the removal of the seton, at the expiration of twenty-four days from the date of its introduction. Under the use of a generous diet, with quinine, he recovered his health; but in January the fragments were as movable as ever. At this time, the immovable apparatus was applied, and kept on for ten weeks; but without any greater success.

March. As the only resource from the high position of the fracture, and at the request of the patient, it was resolved, on consultation, to remove the limb by amputation. From a belief that the bone was diseased, it was proposed to the patient to amputate at the hip joint, but he would not consent.

March 14th. Dr. Cheesman amputated, by the circular method, at the seat of fracture. Upon examining the portion of the thigh removed, it was found that the bone had been sawed so as to remove about half an inch of the upper fragment, which was connected to the lower one by a band of ligamentous union. The lower fragment was deprived of periosteum for about an inch, and quite rough. A portion of the upper fragment was in the same condition.

The patient seemed exceedingly prostrated by the operation, which was increased by an attack of secondary hemorrhage from sloughing of the stump, forty-eight hours afterwards. He continued to sink, notwithstanding every effort, and died on the 24th, ten days after the operation.

Upon examining the stump, the femoral vein was found inflamed, the bone in a state of necrosis, and the muscles disorganized.

Case VII.—LUKE CLARK, born in Ireland, aged 60, was admitted into the New-York Hospital, August 10, 1838.

TEN days prior to his admission, the left os femoris was obliquely fractured, at the junction of the middle and lower third of the thigh. He received no treatment until his entrance into the Hospital, when Physick's modification of Dessault's splint was applied. A splint being also placed beneath the thigh, there was no appreciable difference in the length of the two limbs. At the end of two months the apparatus was removed, but no union had taken place. Friction of the bone and limb were now made, and the splints reapplied for two months more; but still without success. Intermittent fever of the quo-

tidean type attacked the patient at this time, which was, however, after some time, controlled by Fowler's arsenical solution.

December. The immovable apparatus was applied and remained on three months, yet no union took place.

February 19th. Upon consultation of the surgeons, it was resolved to amputate. The operation was performed by Dr. Cheesman, by the circular method.

Upon examination of the portion of the limb which had been removed, it was discovered that there was an oblique fracture just above the condyles of the os femoris; the fragments had passed each other about an inch, and were connected by a ligamentous band. Upon sawing through the lower fragment in the direction of its long axis, it was found exceedingly soft; and yielding upon pressure with the finger, around its medullary cavity, an oily fluid exuded. The tibia presented the same appearances upon examination. The stump healed kindly, and the patient was sent, June 10th, to the Bellevue Hospital; labouring, no doubt, under the same disease of the remaining portion of the os femoris.

Case VIII.—ERASMUS RASMUSSEN, a native of Denmark, aged 20, a seaman, was admitted into the New-York Hospital, under Dr. Post, January 2d, 1839.

THREE months previous, he was attacked with dysentery, which enfeebled him exceedingly; but, notwithstanding, he kept at his work on board the vessel, when, in October, he fell from the maintop to the deck, a distance of forty feet. By the fall, his right os femoris was fractured about the middle. Some rude attempts were made by the officers of the vessel to reduce the fracture and apply splints; but either from the insufficiency of these, or from the prostration induced by the dysentery, which still continued, or more probably from both combined, no union ensued. Upon his admission into the Hospital, he was reduced almost to a skeleton; he had six or seven stools daily; the fractured limb was four inches shorter than its fellow; there appeared not to have been the slightest attempt at bony union. The patient was perfectly helpless, and could not move in bed without assistance; nothing was done for the fracture, all efforts being directed to check the dysentery. Under the internal use of nit. argent., in the form of pill, he began to improve, and some hopes were entertained that he might eventually rally; but an acute attack of pneumonia carried him off.

Upon examining the limb, the os femoris was found broken into three fragments. The middle one, about five inches in length, was placed obliquely across the axis of the limb, connected to the lower fragment by tolerably firm union. Between the upper and middle fragments an exuberant mass of osseous matter had been thrown out, but no bony union had taken place; an imperfect articulation having been formed between these fragments.

Case of Hydrophobia. Reported by RICHARD H. COOLIDGE,
one of the Assistants of the Bellevue Hospital.

JOHN TRSON, a coloured man, *ætat* 23, was admitted to the Bellevue Hospital, on Sunday, July 28th, 1839, at 2 P.M. He had been bitten about 7 weeks previous to his admission by a Scotch terrier, supposed to be mad; the cicatrices of two wounds were visible, one on the inner, the other on the outer side of the forearm, about one inch above the carpus, and also on the right leg, about three inches above the internal malleolus. The wounds had been primarily treated by a physician of this city, with the application of nitric acid, and the patient was presumed to be free from danger.

On his admission he was labouring under the following symptoms: Great difficulty of breathing, with frequent spasmodic contractions of the muscles of the pharynx, larynx, and, apparently also, of the diaphragm; difficulty of swallowing, sore throat, increased secretion of saliva, and pain on pressure over the spine, particularly in the lumbar region. His countenance wore at times a peculiar sardonic expression, at others, it was expressive of fear and anxiety rather than of pain, the eyes were glassy, and the pupils somewhat dilated. He had a desire for water, saying, that if he could drink he would be relieved, as his throat was parched; some water was instantly brought to him, but the sight alone produced such violent spasms, that he was almost suffocated. During the afternoon, he, by request, again attempted to drink some water. With an expression of fear, yet with great resolution, he took the cup in his hand, but before he could raise it to his lips, his courage forsook him, and he was obliged to desist; after a short time, he repeated the experiment with less fear, yet, still with considerable difficulty, and succeeded in swallowing a small quantity, but at the same instant fell back on his bed, in violent spasms and gasping for breath. It was deemed advisable to remove him from his ward to a private room, in doing which, he had to pass an open window, through which a free current of air was blowing; he instantly stopped unable to speak and hardly to breathe, intimating by signs that the sash must be lowered, which being done, the paroxysm almost instantly subsided.

TREATMENT. — From the success attending the use of *spts. terebinthinæ*, in large and frequent doses, in cases of tetanus, and from the analogy between the two diseases, it was determined to try its effect in this case. Thirty-six cups were first applied to the spine, 18 on either side from the fourth cervical to the last lumbar vertebra, and about $\frac{3}{4}$ viii. of blood drawn by them. Two strips of *emp. vesicat.* were then applied over the cupped surface, each extending from the sacrum to the neck, and retained in their place by straps of *emplast. adhes.* drawn round the body. The patient was then put on the use of *spts. terebinthinæ*, in teaspoonful doses repeated every five minutes, mixed in a tablespoon with mucilage of gum arabic. Very little difficulty was experienced in giving him the medicine, he appearing extremely anxious to take any thing which it was thought would do him good; the swallowing of the medicine was always attended with spasm of the muscles of the throat. After taking $\frac{3}{4}$ ii. of turpentine, he had four or five evacuations of a dark green colour and quite watery. A cup of tea was now given to him at his own request, the whole of

which he drank with comparative ease. Pulse, on admission, 76, now 81, full and hard ; tongue slightly furred ; skin soft and moist.

Half-past 9, P. M. The spts. terebinthinæ were now mixed with an equal portion of mucilage, and a table spoonful of the mixture administered every 15 minutes. He has asked for a lemon, which he is now sucking ; pulse still 81, skin moist.

Half-past 1, A. M. The paroxysms have been very violent, but he is at present quite calm ; says he is much better ; his throat is not as sore as it has been, and he is quite sure of recovering. Pulse 96 ; profuse perspiration ; slight dysuria ; he has had four evacuations from the bowels, all of them similar to the first.

2 A. M. Walking up and down the room in agony for want of breath. The abdomen is distended with air ; after belching a little, he feels quite easy for a few minutes, when the dyspnœa returns as violently as ever. In the intervals he is quite composed, and asks pardon for any injury which he may have inflicted during the paroxysm. It has been impossible to administer his medicine since one o'clock, owing to the violence and frequency of the spasms. His actions have not been restrained, except by speaking mildly, and fixing the eye firmly upon him, which he cannot bear. Pulse 100 ; free perspiration ; the secretion of saliva more abundant ; dysuria increased.

5 A. M. As the morning dawned his paroxysms increased both in frequency and violence ; he has made several attempts to escape from his room, and to strike his attendants. The application of straps was considered necessary, in order to prevent him from injuring either himself or others ; some difficulty was experienced in their application, the patient constantly striking and kicking at those about him, and, on one or two occasions, endeavouring to bite them. About 6 o'clock he commenced vomiting a yellow fluid, which was thought to be stercoraceous, but its odour was so much disguised by turpentine, that its character was undetermined.

8 A. M. The vomiting still continues, though at longer intervals ; the patient is perfectly quiet and sensible of his situation, talks composedly of his approaching dissolution, and has requested that a *post-mortem* examination should be made of his body. He died at 20 minutes past 8 A. M., having been in the hospital 18 hours.

AUTOPSY.—Six hours after death.

The head was first examined. The dura mater and pia mater were found perfectly natural ; the tunica arachnoides was highly inflamed, and the inflammation extended along its whole surface over both the brain and spinal marrow ; the superficial veins of the brain were distended. The substance of the brain and spinal marrow presented no unnatural appearance. The pharynx and larynx were examined, and the mucous membrane lining them was found slightly inflamed.

CHEST.—The superior lobe of the right lung was healthy ; the middle and inferior lobes of this lung, and also both lobes of the left lung, were highly congested.

The heart was hypertrophied, and both the ventricles and auricles distended with blood. Some spots of inflammation were found on the pleura as it is reflected over the thoracic surface of the diaphragm.

ABDOMEN. — The stomach and intestines were moderately distended with air, and the mucous membrane throughout the whole extent of the alimentary canal, was found inflamed, and somewhat softened, particularly that portion lining the stomach. The rest of the abdominal viscera were perfectly natural. The veins leading from the wounded parts were minutely examined, and no traces of phlebitis were apparent.

Case of Femoral Aneurism. Ligature of the External Iliac Artery. Cure. By JAMES H. DICKSON, M.D.

ELIZABETH CLANCY, an Irishwoman, 43 years of age, has, of late years, led rather an irregular life; but has enjoyed almost uniform health up to the time of the occurrence of the disease, for which she now applies for relief. She states that about two months ago, she first discovered a tumour on her left thigh, her attention being drawn to it in consequence of the pain which it gave her, particularly while walking. Under the impression that it was a common inflammatory tumour, she has made a variety of applications to it, with the hope of inducing suppuration. Being disappointed in this expectation, and finding that the tumour was increasing very rapidly in size, and becoming more and more painful, she has been induced to make application at the New-York Dispensary for advice. She is not sensible of having sustained any injury of the part, and can assign no cause for its occurrence.

On making an examination of the tumour, its aneurismal character was apparent, from the strong pulsation which it communicated to the hand, both laterally and vertically, by the fact that its pulsation was arrested and its size diminished by compression of the femoral artery, as it passes over the pubis.

The tumour occupied nearly the entire upper third of the thigh, its superior margin being about an inch below the ligament of Poupart; and it extends downwards, following the course of the artery nearly to the point where that vessel turns under the limb, thus occupying nearly the whole of the upper and inner aspect of the thigh. On the outside of the thigh, opposite the aneurismal tumour and extending some distance above it on the hip, there is an extensive sub-cutaneous ecchymosis, presenting precisely the appearance of that which arises from a bruise. A similar appearance, but of less extent, is observed on the inner side of the leg. The circumference of the thigh, at the point occupied by the aneurism, is 21 inches.

The pain in the limb has, for more than a week past, been so excessive as almost entirely to deprive her of sleep. Her general health is, however, unimpaired, her appetite is good, the action of the heart is perfectly normal, and the respiratory murmur audible throughout the entire lungs.

The nature of the case, and that of the operation proposed for its cure, being explained to her, she readily consented to submit to it. After three or four day's confinement to bed, during which time she was restricted to a low diet, and took an aperient, the following operation was performed on the 30th of

June, in the presence of Drs. Gold-Smith, Washington, Swett, Cumming, and Adams.

The patient, having previously taken 60 drops of laudanum, was placed on a table, and an incision made, something more than three inches in length, beginning at a point a little above, and about an inch distant on the inner side, from the anterior superior spinous process of the ilium, extending obliquely downwards and inwards, and terminating over the inner margin of the abdominal ring, about half an inch above the ligament of Poupart.

The incision being continued through the cellular and adipose tissue, exposed the tendon of the external oblique muscle, which, being punctured, was divided upon a director to nearly the extent of the external wound.

The fibres of the internal, oblique, and transversalis muscles were then carefully divided to about half the extent of the external incision.

The finger was then introduced into the wound, and the peritonæum gently separated from its attachments and pressed upwards, so as to expose fully an inch of the artery.

The wound being now held open by a retractor, the artery was separated from its corresponding vein by a few light touches with the handle of the scalpel, and a ligature passed under it with a common aneurismal needle. A careful examination was now made to ascertain that nothing but the artery was in the way of being included in the ligature. Being satisfied on this point, it was tied firmly, and as high up as could be conveniently done; upon which all pulsation in the tumour immediately ceased. Very little blood was lost during the operation.

The edges of the incision were approximated by adhesive straps, a compress and bandage applied, and the patient put to bed, with the thigh a little flexed on the pelvis.

July 1st. Had suffered a good deal of pain during the night, in the lower part of the abdomen and in the limb, but has had some sleep. The limb is sufficiently warm, except the foot, which is slightly colder than its fellow. Pulse 93 and of moderate strength. The leg and foot were wrapped in flannel, and toast water and Indian gruel ordered for diet.

In the afternoon the pulse has risen a few beats, now numbering 100. She complains of great pain in the knee, particularly around the patella. Her skin continues moist, she complains also of great heat in the limb, though, to the hand, it is sensibly colder than the sound one.

July 3d. Has had several hours' sleep during the past night, under the influence of an opiate; she still complains of great pain at the knee.

The wound was dressed. Slight adhesion has taken place throughout its entire extent, except at the point where the ligature comes out. *R. Ol. Ricini* ζ i.

July 5th. Very slight pulsation is perceptible in the anterior tibial artery. The circumference of the limb, over the aneurism, is eighteen inches. The ecchymosis, which was described as occupying the upper and outer part of the thigh, and the inner part of the leg, has faded very considerably. It continued to be gradually absorbed until, at the expiration of a fortnight, scarcely a shade of discolouration was perceptible.

It would be tedious to continue the diary of the case, and I would therefore

merely state, that it progressed to a favourable issue, without the occurrence of a single untoward symptom. The ligature did not, however, come away until the 35th day. Before this time, the aneurismal swelling had entirely disappeared, a small nodule only being perceptible upon examination. The measurement of the limb, on the day in which the ligature was discharged, gives a circumference of $12\frac{1}{2}$ inches.

REMARKS. — The only points at all peculiar in the case, are the existence of the ecchymosis before described, and the occurrence of severe neuralgic pain in the knee, immediately after the operation. The latter symptom strikes me as being very analogous to the *knee pain*, which is so frequently complained of in *morbus coxæ*, and is probably referable to the division of some of the nervous branches, the extremities of which ramify about the knee; being in accordance with a physiological law, by which an injury sustained, or a morbid impression made in the course of a nerve, is frequently referred to its sentient extremity.

The ecchymosis had precisely the appearance of the subcutaneous effusion of blood which results from a severe contusion, being of a dark purple hue in the centre, and gradually shading off into a greenish yellow tint. The patient is not, however, aware of having sustained the slightest injury of the part, and its occurrence in two distinct points, (the inner side of the leg, and the outer side of the hip,) detracts from the probability of its being the result of external violence. In the absence, then, of any external cause to which to ascribe it, how are we to account for its occurrence? I am disposed to attribute it to the pressure of the aneurismal tumour upon some of the venous trunks, thereby producing an obstruction of their corresponding radicles, and a consequent partial extravasation of their contents. As soon as this pressure was removed by cutting off the supply of blood to the aneurism, absorption went on rapidly, and the ecchymosis disappeared, *pari passu*, with the subsidence of the tumour.

Whenever a case presents any peculiarities, though, perhaps, not of great apparent importance, I consider it right to record them, as a knowledge of them may hereafter be of some value; and, for this reason, I have thought it proper to refer to these, perhaps not very essential points of difference, between this and other cases of the kind.

An Essay on the Indications for Tracheotomy, founded on the Absence of the Vesicular Murmur of Respiration. By J. B. BARTH, Clinical Chief to the Faculty of Medicine, Paris. Vice President of the Medical Society of Observation. Translated from the French, by JOHN PUNNETT, M.D.

THE more or less complete absence of the vesicular murmur of respiration, is one of the most important changes that takes place in the lungs in different diseases, but one which has, as yet, attracted but little attention.

Laennec, while mentioning the fact in his general view of mediate auscultation, offers this single remark: "In cases where we find the respiration absent over a certain portion of the chest, we may be assured that the corresponding portion of the lung is, from some cause or other, no longer penetrated by the air." In other portions of his work, he speaks of the temporary suspension of the respiratory murmur in *pulmonary catarrh*, of its feebleness or cessation in cases of *pleuritis* with effusion, and in *pneumo-thorax*. Finally, while speaking of *pulmonary emphysema* he remarks that, "if we listen for the respiration of an individual affected with this disease, it cannot be heard over a large portion of the chest, although the sound on percussion continues very clear, and in those portions where the respiratory murmur is heard, it is still very feeble."

M. Rostan, in his article, *Auscultation*,* remarks that, "if the sound of respiration ceases to exist in a portion of the lung, that portion is impermeable to the air." He alludes particularly to cases of *pulmonary emphysema* and of *pneumo-thorax*.

Dance† also remarks, that "the murmur of respiration becomes diminished from a multitude of causes, in different diseases of the lungs, and always indicates that the quantity of air entering the lungs is insufficient to the oxygenation of the blood. This diminution of the respiratory murmur may be the result of *hepatization* or of *tubercular infiltration*. The murmur may also be hardly perceptible in *pneumo-thorax* or in *pulmonary em-*

* Dic. de Med.

† Dic de Med. on Répertoire Général.

physema; or it may cease to be heard entirely, when the effusion has completely compressed the lung."

Finally, without attempting to quote the statements of a large number of authors, I will only state the remarks of M. M. Dela-berge and Monneret, who, in their excellent compendium* of modern opinions offer the following: "the murmur of respiration *is diminished* when the lung is pushed a few lines only from the wall of the thorax, by an effusion of liquid into the cavity of the pleura: when a thick false membrane covers the pleura of the lung: when the substance of the lung is slightly congested with blood or with serum: when a tuberculous infiltration is sufficient to prevent the free expansion of the pulmonary tissues — *it is entirely absent* when the liquid effusion is sufficient to prevent the lung from remaining in contact with the walls of the chest: when from inflammatory or other morbid action, the substance of the lung has become indurated and impermeable to air: when a bronchus is obliterated, so that the air can no longer penetrate the branches that spring from it."

If we sum up these different opinions, we shall observe that the murmur of respiration may become either feeble or absent: 1st, in affections of the pleura, as the effusion of liquids or gases, or of thick false membranes: 2d, in diseases of the lung itself, as tubercles, catarrh, emphysema, obliteration of the bronchi. These are the causes of this phenomenon which are mentioned by authors, — and this is the limit of their observations up to the present time. There are, however, other causes which often give rise to a more or less perfect abolition of the respiratory murmur, and which, in their relation both to diagnosis and therapeutics, it is of the highest importance to understand. *I allude to those obstacles which prevent the free introduction of air into the air-passages, by producing stricture or occlusion either of the larynx or trachea.* In 1831, when a walker in the wards of M. Louis, I had occasion, for the first time, to observe a fact of this kind, very remarkable from the nature of the obstruction, and which I will detail with a minute description of the pathological lesion.

* Compendium de Médecine Pratique.

CASE I. *Sensation of uneasiness at the Throat, — Dyspnœa, progressive, finally becoming extreme, — great change in the voice, — almost complete absence of the respiratory murmur. Death. Stricture of the Glottis. Hypertrophy and degeneration of the Thyro-arytænoid ligaments.*

FRANÇOIS PARIS, aged 54 years, a day labourer, of middling stature, good constitution, and of sanguine temperament, was admitted Sept. 1st, 1831, into the hospital of La Pitié. Three months and a half before this, he was attacked with a feeling of uneasiness about the larynx, which he compared to the sensation which a tumour at that part might be supposed to produce. This difficulty increased insensibly, and was soon accompanied by slight dyspnœa and change in the voice; still the patient lost but little flesh. About two months from the first symptoms, a slight cough supervened; a month afterwards the voice and respiration acquired a hissing character, until on the 26th of August the continued increase of these symptoms obliged him to interrupt his occupation; five days after this, he entered the wards of M. Louis, at La Pitié. The next day, September 2, the following was his condition: he lay with his head and body raised; his face neither red nor much swollen; his features expressive of great distress, but without any alarm as to his situation; respiration considerably embarrassed, hurried, and irregular; inspiration painful, noisy, and accompanied with a peculiar hissing; expiration easy. The voice greatly changed; speech very difficult; tone of the voice hoarse and noisy, and his words had a jerking character, as if interrupted by a convulsive effort. The thorax and shoulders expanded suddenly at the moment of respiration, which took place 15 times a minute. *The chest was sonorous in its whole extent, but the respiratory murmur was almost extinct, only a slight sonorous rattle being perceived at the posterior portion of the thorax.* The finger passed into the throat did not discover any soft tumour about the upper part of the larynx. Pulse 112. (Prescription — venesection ad ξ ix. demulcent drinks; pediluv with mustard; flaxseed-injection; soup.)

At the visit, the 3d, patient dead; was informed that the evening previous he had frequently sat up, had several times risen and walked the wards to enable him to breathe easier. Through the night he still sat up, with his head raised, and even left his bed several times; he died about 5 A. M.

AUTOPSY.—Twenty-eight hours after death.

LARYNX.—Epiglottis natural. The mucous folds connecting the arytænoid cartilages with the tongue slightly infiltrated. The submucous cellular tissue lining the superior and internal portion of the larynx was slightly congested; but on attempting to pass the little finger into the cavity of this organ, we discovered that at the level of the vocal chords, it was almost entirely obliterated by two firm tumours, growing from each side of the larynx. The posterior portion of the larynx being divided, these tumours were found to have originated beneath the folds of the mucous membrane which form the inferior vocal chords. They extended so far upward as to efface the opening of the ventricles of the larynx, and to push up the superior vocal chords. After removing, with care, the mucous membrane lining the glottis, there was seen on each side, at the place occupied by the thyro-arytænoid ligament, a tumour, narrowed towards its two extremities,

expanding at its centre, and which, upon close inspection, seemed to be the ligament itself, altered in tissue and dimensions. Near its point of attachment some fibres were still discernible, but the rest of it was hypertrophied and transformed into a dense, homogeneous mass, presenting some spots of ecchymosis, and of an aspect approximating that of some cases of commencing schirrus. The length of the tumour, between its two points of attachment, was 13 lines. In its most prominent part its vertical diameter was six lines, and its transverse, four lines and a half. The lungs were emphysematous, and the inferior lobe of the left lung congested. The heart was red, flabby, and softened.

This observation, at the time when it was made, did not attract my particular attention, and I had almost forgotten it, when, in 1835, being house physician in the same wards, a new example was presented to me, very analogous to the preceding.

CASE II. *Gonorrhœa, — marks of constitutional syphilis, — 3 years after, progressive dyspnœa, — alteration in the voice, — respiratory murmur wanting, — threatened suffocation, — laryngotomy. Death. Autopsy. Contraction of the cavity of the larynx, — excrescences of a syphilitic appearance, — œdema of the submucous tissue, — caries of the cartilages, — perforation of the œsophagus.*

ROUTIER, aged 30 years, 5 feet 6 inches in height, of strong frame, entered the Hospital of La Pitié, in the spring of the year, 1835. He had had gonorrhœa, 3 years before, and on his admission still presented cicatrices of a copper colour, under the chin and on different parts of the body. His present disease was of 4 months standing, and commenced with a cough, at first dry and unfrequent, afterwards constant and attended with an expectoration, the character of which the patient could not describe. At the same time, his voice became changed, and he experienced difficulty in breathing. These symptoms gradually increasing, induced him to enter the Hospital, 5th May; the succeeding day he presented the following symptoms: Paleness; emaciation; hoarseness — respiration oppressed and slightly hissing; cough, followed by a semi-opaque expectoration, — no pain in either the chest or larynx, even on pressure. On examining the fauces no œdema was discovered; on percussion, the chest yielded at every part its normal sound, but the respiratory murmur was wanting. Nothing was heard but the hissing sound in the larynx — no rattle, nor abnormal resonance of the voice in any part; the other functions not sensibly affected. (Prescription: — sudorific potion, — a pill containing $\frac{1}{8}$ of a grain of corrosive sublimate, and $\frac{1}{4}$ of a grain of opium, — flax-seed injection.)

This treatment was continued the following days, increasing the dose of the sublimate to the $\frac{1}{4}$ of a grain in 2 pills, and the patient remained nearly in the same state, — walked about nearly all day, and did not appear to suffer pain or uneasiness as to his condition.

11th. Dyspnœa more marked; inspiration long, and more hissing than before; voice more hoarse, but strong.

13th. The patient in bed; face pale, anxious, and covered with sweat — intelligence impaired, — respiration much more embarrassed and irregular; inspiration hissing and prolonged, and ceasing sometimes for 8 or 10 seconds,

—interrupted by a loose cough accompanied by a thick viscid and slightly aërated expectoration. The finger introduced into the throat discovered no œdematous swelling. The chest was sonorous on both sides in front, but the *respiratory murmur wanting*.

Behind, on the left side, the vesicular murmur *was also absent*, whilst on the right, percussion was dull, and the respiration bronchial,—the pulse frequent and hard, 160 a minute; the skin hot and moist, and on the right side of the nose an erysipelatous spot the size of a franc,—the patient growing worse during the day, and being threatened with suffocation, M. Lisfranc performed the operation of laryngotomy. The moment the crico-thyroid membrane was divided, the patient started up and breathed convulsively, but as soon as the canula was introduced, (the diameter of which was about 2 lines,) he became calm, breathed with ease, and passed a tranquil night.

14th. Respiration easy, though irregular; patient more intelligent and lively;—pulse still accelerated; the erysipelas extending; the canula was not changed, but cleansed of the mucus obstructing its orifice. During the night delirium; the 15th, his respiration was still much oppressed, but towards evening the dyspnœa increased, and he died suddenly at 5 o'clock.

AUTOPSY.—Forty hours after death. The part of the face, which was the seat of the erysipelas, was of a pale yellow colour, and hard to the touch.

HEAD.—A small fibrinous clot, and a half spoonful of black blood in the superior longitudinal sinus. The cavity of the arachnoid slightly moistened with serum. Moderate infiltration under the arachnoid, between the circulations at the posterior part of the brain,—the cerebral veins moderately injected. A tablespoonful of serum in each ventricle,—the surface of the gray substance was of its natural firmness and colour, and its central part of a lilac tint—the white substance somewhat dotted at the base of the brain.

NECK.—The velum of the palate, and its arches, as well as the pharynx, infiltrated and swollen. The tonsils presented depressions and elevations caused by a thinning of the mucous membrane, without appreciable ulcerations. The epiglottis and the sub mucous cellular tissue of its folds were œdematous, presenting a yellowish gelatinous appearance, firm, and not to be removed by pressure. The same infiltration, less marked, occurred in the upper part of the larynx, but was again much more marked upon the superior and inferior vocal chords, the tumefaction of which, narrowed the transverse diameter of the larynx, and effaced the interval which forms the opening of the ventricles. On the anterior face of the arytenoid cartilage, was a soft tumour of a pale red colour and unequal surface, composed of a large number of small secondary tumours, resembling venereal vegetations. This tumour, of the size of a small almond, obliterated the posterior half of the glottis, the opening of which was thus contracted in every direction, so as to be only 5 or 6 lines in length, and $1\frac{1}{2}$ lines in its transverse diameter. Immediately above the tumour, on the internal and posterior surface of the cricoid cartilage, was observed a depression of 4 or 5 lines in diameter, with a smooth but irregular surface of a rose colour, presenting round eminences like those noticed on the tumour, and deeper depressions; also two small bands, under which a probe might be passed, and which

seemed the result of an old ulcer cicatrized. The probe passed under one of the bands, penetrated to a rough surface formed by the superior border of the cricoid cartilage, which was friable, creaking under the scalpel, eroded and destroyed for the space of two lines between the arytenoid cartilages. This alteration extended forward to the right side, occupying a space varying in depth 5 or 6 lines. The corresponding arytenoid cartilage was detached, and its base partially destroyed. From the eroded surface of the cricoid cartilage proceeded two fistulous passages of the diameter of a quill, smooth on the inner surface, crossing obliquely the muscular layer of the pharynx from above downwards, to terminate an inch below in the cavity of this organ, and in the centre of an ulcerated surface, 6 lines long and 3 wide, the uneven and flattened edges of which were undermined at the lowest part for 2 or 3 lines, so as to form a small cavity containing two fragments of bone of a spongy texture, and of the size of a grain of barley.

The inner surface of the trachea was of a bright red colour, and finely injected, and its aspect contrasted strikingly with the uniformly pale-rose colour, or yellowish tint, of the parts above it. The bronchi were of a rose colour, and their mucous membrane smooth, thin, and of proper consistence. The right pleura contained about twenty ounces of serum, mixed with albuminous flakes, the lung on this side was covered with recent false membrane, and reduced to a third of its ordinary size. The lower lobe was weighty, and its tissue of a deep red colour, granulated and softened. The left lung was of its natural size, its tissue somewhat red, particularly at its base, but otherwise natural. There were no traces of tubercles or emphysema.

The pericardium contained about a spoonful of serum; the heart was somewhat softened, but otherwise natural.

* * * * *

Being now better acquainted with auscultation, my attention was strongly drawn to the circumstance of the total absence of the respiratory murmur on both sides of the chest, coinciding with the natural sound on percussion; and when the autopsy showed the tumour to be situated in the larynx, I immediately called to mind the case I had observed four years before. I at once seized upon the two points which they had in common, namely, the principal lesion, and the symptom we are considering, and I could not help seeing a relation of cause and effect between the obstacle to the free ingress of air into the air tubes, and the absence of the respiratory murmur in the chest: and since that time I have felt myself authorized, in my courses on auscultation, to class this lesion with those which cause a cessation of the vesicular murmur. What I then announced with reserve, and as a proposition founded on two facts only, has since been confirmed by the following case:

CASE III. — *Cough, — emaciation, — One year after the commencement of the disease a sense of uneasiness at the larynx, — dyspnœa, — hoarseness, — aphony, — the sound of the respiration very feeble, — extinct. Death. Destruction of the inferior vocal chords by an ulcer, with tumefaction and projecting edges, — very marked stricture of the larynx.*

GODEFROY JOSEPHINE, aged 39 years, a domestic, of rather feeble constitution, pale and emaciated, was admitted into the Hospital of La Charité, Sept. 14, 1836. Formerly regular in her menstrual periods, she enjoyed habitually good health before her present disease, which was of a year's standing, and commenced with catarrh, which had continued ever since, accompanied with palpitation after exercise. For the same period, appetite impaired; emaciation; and for two months, amenorrhœa. About the middle of December she became sick, with chills, and a feeling of weakness, which confined her to her bed. To these symptoms was added pain in both shoulder blades, and under the right clavicle, with dyspnœa, cough, and expectoration marked with streaks of blood; her voice, formerly clear, became hoarse, and she finally entered the Hospital. Pectoral potions, juleps, and a blister to the neck were prescribed, which means gave no permanent relief; the dyspnœa and the cough persisting, and the hoarseness becoming every day more marked. I did not see the patient until the beginning of January, 1837, when she presented the following symptoms: paleness; emaciation; but little pain in the chest; sensation of uneasiness at the throat; dyspnœa; respiration noisy; cough unfrequent, without much expectoration; hoarseness; chest emaciated but sonorous; respiratory murmur very feeble; frequent palpitations; very little appetite. The feebleness of the respiratory murmur, with the clear sound on percussion, had given the impression that the case was one of pulmonary emphysema, and under this view of it, pectoral potions had been prescribed; but the above-named symptoms increased, and on the 25th January the patient was unable to leave her bed.

She lay with her head and body raised; face pale and anxious; lips of a blueish tint, and her whole body greatly emaciated. She experienced, at the larynx, a feeling of uneasiness, without marked pain, but with great difficulty of deglutition. Her voice was completely lost; respiration very much embarrassed and labouring, 28 a minute. Inspiration gave rise to a very noisy, hoarse sound, followed during expiration by a sort of cooing sound, somewhat less sonorous. Cough, not frequent, but painful, and the patient with difficulty expectorated a few opaque sputa. The chest emaciated but symmetrical, the clavicles prominent, and the intercostal spaces depressed. Percussion elicited a clear and natural sound. *The respiratory murmur exceedingly feeble, almost entirely wanting throughout the chest, and without rattle.* On applying the stethoscope to the larynx, a very marked sonorous sound was heard during inspiration, such as might be produced by a column of air passing rapidly through a narrow orifice. The finger introduced into the throat could discover no tumefaction at the upper part of the larynx. The patient experienced continual palpitation without pain in the region of the heart, which yielded a little less sound than natural on percussion; the sounds of the heart were not changed either in rhythm or tone; the pulse small and regular 104 a minute;

weakness great ; appetite gone ; tongue somewhat moist, and covered with a dirty white coat ; no diarrhæa ; urine free ; night sweats.

The following day all these symptoms increased in intensity, the features became more and more changed, the anxiety more marked ; the dyspnœa constantly on the increase, became finally extreme, and the patient died 3d of February, at ten o'clock at night.

AUTOPSY. — Thirty-six hours after death ; dry and cold weather. * * *

NECK. — Externally, under the chin, was a whitish cicatrix, five lines long and two broad. The interior of the pharynx presented nowhere either tumefaction or ulceration. The œsophagus of a pale rose colour, without appreciable alteration. The epiglottis supple, and of a yellowish white colour ; the soft parts in front of the larynx sound. In looking into the cavity of the larynx, the glottis was completely closed, and the parts, on distension, would admit an opening only one line and a half broad, and four to five lines long. When opened, the internal surface of the larynx was everywhere pale and smooth, except about the vocal chords. The inferior chords were destroyed on each side, and in their place was observed an unequal and ulcerated surface, about four lines broad, and extending from the anterior portion of the arytenoid cartilages to the angle formed in front by the thyroid cartilage. The whole of this surface was swollen, and its inferior edges ragged and prominent, produced by the ulceration already noticed. The cricoid cartilage was ossified at its centre. The lining membrane of the trachea natural.

CHEST. — The bronchi coated by a moderate quantity of whitish mucus ; the internal membrane healthy. Old firm adhesions about the summit of both lungs ; the cavity of each pleura contained about an ounce of serum. The upper lobe of both lungs contained a few tubercles, some miliary, others softened, and others again degenerated into chalky concretions. These organs were otherwise healthy.

In this case, as in the preceding, we find an almost complete cessation of the respiratory murmur, without any change in the sound on percussion, and although the lesion of the larynx differed somewhat from that noticed in the preceding case, as respects its complication, I cannot think that the small tubercular masses found in the lungs should prevent us from considering this case as confirming the results furnished by the first two cases. It was not after the *post-mortem* examination only that I thought this fact might be classed with the preceding ; I had, from the beginning of January, long before the patient's death, declared the relation which I believed to exist between the *cessation of the respiratory murmur* and an obstacle to the passage of air into the air-tubes ; and this symptom, taken in connection with the change of the voice, had induced me to offer as my diagnosis, lesion of the larynx, with diminution of

its cavity, and the opening of the body served only to confirm its correctness.

Not the least doubt I think can exist, after what has been adduced, as to the real existence of the phenomenon in question. But the fact would be worth little were it not capable of a practical application. And, in the first place, a knowledge of the intimate relation between the diminution of the respiratory murmur, and some obstruction in the air passages, would have pointed out the necessity of tracheotomy in Case I., nor would it have permitted us to have mistaken Case III. for a pulmonary emphysema, a form of disease beyond the reach of surgery, while an operation might have removed at least the direct effects of an obstruction to the passage of the air through the larynx.

It was a knowledge of this fact, also, that induced me to resort to a very active treatment in Case IV.,* as soon as it entered the hospital. A fact also, which, while it thus possesses the highest value in diagnosis, is, also, of great importance in prognosis, as is well illustrated in the following case:

CASE V. — *Chill, — fever, — sore throat, — dysphagia, — dyspnœa, — change of voice, — false membranes in the pharynx, — continuance of the respiratory murmur, — (favourable prognosis,) — antiphlogistic treatment, — recovery.*

LEGALLOIS MARIE, æt. 36 years, a seamstress, of good constitution, regular in her monthly periods, and enjoying, commonly, good health, had been affected with catarrh about 3 months; when on the 14th of April, while passing along the canal of Valmy, the cold wind blew directly upon her. The following night she felt unwell; and the following morning she was affected with chills, pain in the head and limbs, and was obliged to take to her bed.

On the 16th and 17th, the febrile excitement continued, aggravated towards evening.

On the 18th, she complained of pain in the throat and about the angles of the lower jaw, extending to the ear on either side, and accompanied by difficulty in swallowing, and in the expectoration of mucus.

On the 19th these symptoms were aggravated.

On the 20th the pain had extended to the larynx, the voice had become more changed, and the respiration oppressed.

On the 21st the patient was brought in a carriage to the Clinical Wards; this was her actual condition: Countenance expressing suffering and anxiety;

*A case of recovery from, probably, acute laryngitis, in which the respiratory murmur was also nearly extinct, but omitted in the translation as containing nothing of particular importance in relation to the present subject. — *Tr.*

face suffused; heat of skin; pulse 108; pain in the throat and submaxillary region, extending to the ears; pain along the larynx; dysphagia; voice almost extinct; difficult expectoration of viscid mucus; slight swelling of the submaxillary ganglions, with tenderness on pressure in this region, and all over the anterior part of the neck; very intense redness of the mucous membranes of the throat, which is covered also, in some parts, by soft, yellowish-white false membranes. In listening to the respiration, *the vesicular murmur was heard with sufficient distinctness in every part of the chest.*

V. S. §xiv. Tartar emetic gr. i. Injections. Mercurial frictions to the neck. The tartar emetic produced 7 or 8 returns of vomiting.

The next morning the patient was much better. * * * * She was discharged completely cured on the 7th of May.

In the above case, the intensity of the symptoms, the pain in the larynx, the loss of voice, the existence of patches of lymph in the throat, were sufficient to justify the suspicion that the false membranes had extended to the larynx so as to produce an obstruction in that organ, rendering the danger of suffocation imminent. But as I found the respiratory murmur in its natural condition, both at the time the patient entered the hospital, and at the evening visit, I formed a more favourable opinion. Every succeeding day presented the respiratory murmur in a healthy condition; the prognosis became also more favourable, and the result confirmed the opinion I had formed.

In truth, a correct knowledge of the fact in question, (the condition of the respiratory murmur,) will enable us to predicate the success of the operation for tracheotomy in one case, and its failure in others, and should teach us to resort to it without delay, or to reject it as dangerous, according to circumstances. It is a point then, important to the surgeon as well as to the patient, since, if in one case, it may remove the imminent danger of death, it may also cause useless suffering, or hasten a result which is very apt to be charged entirely to the operator.

CASE VI. — On the 19th of June, 1836, being at that time house-surgeon in attendance at the Hospital of La Pitié, I was called about 6 o'clock in the evening, to see a patient in the Ward St. Charles. This woman, 47 years old, of tolerably good constitution, was suffering from intense dyspnoea. The information that I could obtain in relation to the patient was, that she had entered the hospital the evening previous, that she had complained for 5 or 6 days of pain in the throat, and of difficulty in breathing, and that notwithstanding the treatment that had been employed, these symptoms were constantly getting worse. Since the morning visit the dyspnoea had been still progressing; and when I

saw the patient she was lying in bed with her head and body much raised, the features altered and expressive of great anxiety, the voice hoarse and weak, the respiration laborious, unequal, and extremely oppressed, so that the danger of suffocation appeared imminent.

Was this a case for the operation of tracheotomy? Before deciding this point, I examined the patient carefully: first, passing my finger backwards to the roof of the tongue, I could discover no projecting ring there. I then listened to the respiration, and I heard, particularly on the left side of the chest, a remarkable sound; a noisy murmur which seemed to originate in the chest itself. This sound appeared to me like what would be caused by strips of membrane loose in the bronchi, and moved about by the passage of the air through these tubes; then remembering that the air must penetrate into the divisions of the bronchi in order to produce this sound, I came to the conclusion that there could be no marked obstruction in the larynx; and that as the dyspnoea was very great, and the voice much affected, the false membranes must extend through nearly the whole of the air passages. As also the absence of a soft ring at the upper portion of the larynx, forbade the idea that œdema of the larynx existed, I came to the conclusion that the case was one of croup, affecting both the larynx and the bronchi.

Satisfied with this opinion, I refused, notwithstanding the solicitations of a friend who was present, to perform the operation of tracheotomy, thinking that the operation could be of no use: but being unwilling to assume the responsibility, I sent for M. Lisfranc, the chief surgeon of the hospital. He arrived an hour afterward, examined the patient, and, knowing that I had paid a good deal of attention to the subject of auscultation, he asked my opinion of the case. I told him that I thought an operation would be of no use, — and gave him my reason. He came to the same conclusion, and decided against the operation. An hour afterward the woman died. The *post-mortem* examination was made by M. Poumet, now hospital *interne*, who examined the parts with great care.

The pharynx, the tonsils, the velum, the nasal fossæ, the œsophagus, were perfectly healthy.

At the base of the tongue, on the left side, was an ulcer, elliptical in shape, from 4 to 6 lines in diameter, superficial, with a grayish base, and abrupt edge.

Commencing with the inferior surface of the epiglottis, the internal surface of the air passages was lined through its whole extent by a continuous false membrane. * * * * * Adhering closely to the internal surface of the epiglottis, from which it could not be detached without being torn, the degree of adhesion diminished gradually from above downwards, so that the false membranes could be separated from the trachea with a little care, while it adhered to the bronchial ramifications only at the point of their division. * * * *

* * * * * Lying in close contact with the trachea, the false membranes formed a cylinder with a diameter from 21 lines to an inch above the bifurcation. * * * * * The pleuræ were without adhesions.

The lungs presented no appearance of tubercles, or of emphysema; the middle lobe of the right lung was slightly inflamed in the first and second degree.

The result of this case and the *post-mortem* examination, fully confirmed the diagnosis and the propriety of the course pursued as to the operation. The extension of the false membranes into the bronchi was established, and the loose way in which they were attached in the smaller tubes, explained satisfactorily the sound heard during life. As to the propriety of the operation, no one can doubt as to its uselessness in such a case, inasmuch as bearing in mind the dimensions of the cylinder formed by the false membrane in the larynx and trachea, it must be evident to every one that the cause of the asphyxia was not there, but in the bronchi.

I will now relate a case in which tracheotomy *was performed without any advantage*.

CASE VII.—During the month of December, 1837, M. Landouzy, house-physician in the wards of M. Louis, asked me to visit a woman at Hôtel Dieu, in the wards of M. Landry, who presented the symptoms of very intense dyspnœa and convulsive respiration, threatening suffocation. I applied the stethoscope to the chest of the patient, and *found the respiratory murmur noisy on both sides of the chest, the thorax being sonorous throughout*. Hence I felt myself warranted in saying that there was no obstacle in the larynx, judging from the facts which I had previously observed. This case, on the contrary, seemed to possess something of a spasmodic character. I dared not, however, take upon myself the responsibility of the issue by giving my opinion against an operation. About 2 P.M. M. Danyau, surgeon of the Hôtel Dieu, was called upon, and performed the operation of tracheotomy. *The patient was in no way relieved*. The following day, on *post-mortem* examination, there was found to have been no obstruction whatever in *the air passages*. The larynx, trachea, and bronchi, presented only the redness of inflammation.

But it is not by negative facts only, that I am enabled to establish the important principle, that the absence of the respiratory murmur is the indication for tracheotomy, and in proof of this, I will refer to the following case which I give in all its details, as it is of great practical value.

CASE VIII. *Syphilis at the age of 25 years*.—At 49, commencement of the disease, —dyspnœa, —sense of uneasiness at the throat, —cough, —change of the voice, —continual increase of these symptoms, —respiratory murmur entirely wanting, —threatened suffocation.—Tracheotomy, —instantaneous relief.—restoration to health.

APRIL 17th, 1837. Halé, aged 49 years, formerly a soldier, of good constitution,

and somewhat florid complexion, was admitted into the Hospital of La Charité. For a year past, he had charge of a machine for shearing sheep; being well nourished, and leading a regular life, he was habitually in the enjoyment of good health, and had never any other disease than a gonorrhœa at the age of 25, with chancres on the penis, which were treated with pills of a composition unknown to him, and which cured him in six weeks, during and since which time, there had supervened no chancre nor pain in the throat. His present disease dates from October, 1836. It commenced gradually, without any known cause, and without pain; with catarrh and cold in the head, attended with a little dyspnœa and expectoration. A month afterwards he experienced a sensation of uneasiness in the throat, accompanied by cough, some hoarseness, slight difficulty in swallowing, with increase of dyspnœa.

These symptoms continuing to increase, the patient entered Hôtel Dieu, for the first time, in February, 1837. His voice at that time, was hoarse and almost extinct.

He left the Hospital relieved, after a stay of three weeks, during which time he had been treated by venesection, five applications of leeches to the larynx, pediluvia and mercurial frictions, but his symptoms soon re-appeared with some aggravation, and obliged him to return to the hospital, April 17.

The next day he was found in the following state: Decubitus easiest on the right side, expression of anxiety; violet tint of the lips and nose. No œdema, uneasy feeling at the larynx, as if the air was partially obstructed; voice hoarse and slightly hissing; considerable dyspnœa which he referred to the larynx, more marked in inspiration than in expiration. Respiration noisy and hissing, even at a distance, especially during inspiration. Cough sonorous and hissing, attended with slightly opaque mucous expectoration.

On inspection, no tumefaction apparent in the throat; no deformity of the chest.

The touch discovered no tumour on the exterior of the neck; the finger passed into the throat, did not feel any swelling or œdema.

On percussion, no sensible change in the sound of the chest. *On auscultation* of the larynx, a very noisy respiratory murmur was heard, stronger in inspiration than in expiration, *while the chest, on the contrary, furnished neither in front nor behind, any trace of the vesicular murmur*; a slight resonance of the sounds in the larynx, somewhat more marked at the upper part of the right lung was all that was heard,—nothing unnatural about the heart; the pulse of moderate strength, regular, 92 a minute; heat natural; no disturbance in the other functions. Demulcent drinks; 15 leeches to the larynx; emollient cataplasms; fumigations of marsh mallows; soup and broth.

The leeches were applied about noon, and drew well; about 2 o'clock the patient attempted to inhale the fumigations, but was soon so much oppressed as to be obliged to discontinue them.

The suffocation increased with frightful rapidity, and at 3 o'clock he was found in the following state: Countenance expressive of extreme anxiety, pale; expression of the features greatly changed; eyes prominent, seeming to seek relief; patient very restless, sitting up with an inclination forward, made signs that he was suffocating, and that he should be bled. Voice extinct;

respiration very laborious; inspiration attended with a sort of cooing sound heard in every part of the ward; expiration also very noisy; pulse small and hurried. Suffocation seemed imminent and tracheotomy instantly called for. M. Velpeau was sent for, and in the meantime, I ordered a pediluvium with mustard, and arranged the instruments in readiness to operate in case M. Velpeau should not be found. In half an hour, however, he arrived, and the patient eagerly submitted to the operation.

The soft parts in front of the trachea were cut from above downwards in the median line, from the inferior part of the larynx to the sternum. No artery was opened, but the wound furnished a large quantity of venous blood. Without waiting for the flow to cease, the operator made an incision which opened the trachea for 5 or 6 lines above the sternum, which was then prolonged to near the cricoid cartilage.

Immediately on opening the trachea a hissing sound was heard; a small quantity of blood entered the air tube, from which the patient experienced sensible inconvenience, but a few strong and convulsive expirations immediately expelled it, mingled with mucus, against the face of the operator and his assistants. But in a moment or two, a silver canula, at about 4 lines in diameter being introduced, the patient became more calm, and his features more animated; he expressed manifest relief by smiling and by signs, for he had lost the power of speech. The noisy cooing sound attending the respiration ceased, and only a trifling sound was heard, caused by air entering and escaping from the canula; the pulse rose, the patient became tranquil, and from time to time, expelled through the canula, by means of a quick expiration, equivalent to a cough without resonance, mucus streaked with blood. The flow of blood soon ceased.

An hour after the operation the countenance of the patient expressed content. His gestures gave token that he was comfortable. His countenance recovered somewhat its colour, the respiration became sufficiently easy and regular; 28 inspirations per minute; pulse 124, of moderate force and regular. The patient could not recollect the introduction of the canula, but its presence occasioned no uneasiness. The remainder of the evening and night were passed tolerably well, but without sleep.

19th, in the morning. The patient in bed with head slightly raised, was tranquil, and had an expression of calmness and confidence; felt only slight pain in the throat; voice extinct, but when the finger was placed on the opening of the canula, he spoke in a low and hoarse but intelligible tone. Deglutition somewhat impeded; a slight sensation of tumefaction at the bottom of the throat, and liquids passed with some difficulty. The oppression complained of previous to the operation had disappeared; respiration unembarrassed, regular, and equal. The air passed, according to the patient's account, solely through the canula, at the orifice of which a slight sound was produced in expiration and inspiration. The respiration was occasionally difficult, when mucus obstructed the canula, but as soon as it was expelled by a strong and quick expiration, it became more free and easy. These expirations supplied the place of a cough, and expelled, from time to time, thick mucus but little aërated, like that occasioned by a cold in the head, and of a red tint, but not so deep a colour as that of

the preceding evening. A slight erythematous redness surrounded the wound, which insensibly disappeared at one or two inches from its edges. At the larynx, a slight sound was occasionally heard on auscultation, more marked in expiration, and which seemed to take place at the orifice of the canula. * *

On auscultation of the chest, *a very marked respiratory murmur was heard in every part*, which was purer and more distinct as the canula was free from obstruction; mixed occasionally with a sonorous ronchus, and some mucous rattle, which disappeared when the patient expelled by strong and quick expirations the mucus in the canula and air-tubes. In other respects he experienced only slight head-ache and dizziness when he sat up,—sight good; no ringing sound in the ears; pulse regular, and fuller than on the preceding evening, 112; no palpitation of the heart; thirst moderate; no appetite; demulcent drinks, a bottle of Seidlitz water. Pectoral juleps; venesection ad $\frac{3}{4}$ xij.; broth as nourishment. The canula was from time to time cleansed. He passed a good day, and slept about two hours during the night.

20th, in the morning. Expression of the countenance almost natural. The patient complained of pain only about the edge of the wound. He still experienced a sense of tumefaction in the throat, and a little difficulty in swallowing,—was scarcely conscious of the presence of the canula in the trachea. Respiration easy, occasionally embarrassed from the same cause as on the preceding evening; equal and regular, 24 a minute. During the last 24 hours the patient expelled from the mouth about two ounces of a dirty white liquid. Auscultations of the larynx and trachea gave precisely the same results as the day previous. Still some difficulty about the head, without ringing in the ears; no appetite; three stools in the last 24 hours; pulse regular and of moderate force, 92; heat natural. The blood drawn the day previous presented the buffy coat. (Demulcent drinks; pectoral potion; astringent gargle of water $\frac{3}{4}$ iv. alum 3j.; broth.) Towards 4 in the afternoon, the patient having loosened by his motions the strings which kept the canula in place, the instrument was forced out by an expiration. Being immediately summoned to the patient, and finding the canula nearly expelled, I withdrew it entirely for the purpose of cleansing it. During this time the patient breathed equally well through the aperture in the trachea. On replacing the canula the patient breathed perfectly, and I heard, on auscultation, a very strong pulmonary expansion in every part, a soft and puerile respiration, unattended with any rattle.

From the 21st to 30th, the patient continued in this improved state. The voice, on stopping the canula, was more distinctly heard. No embarrassment in swallowing; the respiration always easy, regular, and constantly at 24 inspirations a minute. While the canula was open no air passed through the larynx, but on closing it a small quantity traversed the natural passage; very little sound took place at the orifice of the instrument, and that little was scarcely audible when the canula was well cleansed. The cough diminished in frequency, the expectoration became less and less abundant, assuming a greenish hue, and becoming more opaque, as at the close of pulmonary catarrh; the tumefaction gradually subsided about the lips of the wound, which became covered with granulations very much disposed to contract, so that if the canula

was for a few minutes removed, much difficulty occurred in replacing it; the erythematous redness, above alluded to, disappeared after the 22d.

* * * * *

On applying the ear to the chest, 1st, with the canula in its place and open; the vesicular murmur was heard naturally in every part, strongly marked in proportion to the freedom of the canula from any obstruction, and mingled occasionally with a sonorous rattle, which disappeared after the expulsion of mucus. 2d, When the canula was removed and the wound open, the natural respiratory murmur was distinctly heard without being very strong, attended at times with a sonorous ronchus.

If the orifice of the wound was covered with a bit of adhesive plaster finely perforated, the respiratory murmur was very feebly heard, but became more evident when the obstacle was removed. Finally, when the wound was perfectly closed *no evident trace of the respiratory sound was perceived*, but simply, from time to time, a little sonorous ronchus. The pulse, during the time, was constantly regular and soft, varying from 74 to 78 a minute. The appetite improved gradually, the sensation of weight about the head which, since the 22d, had been felt only in the evening, had entirely disappeared on the 25th, and the patient slept 6 or 7 hours each night, in successive naps. The canula was changed daily. The demulcent drinks, pectoral potion, and the astringent gargle were still continued, with an occasional bottle of Seidlitz water. The quantity of food was gradually increased. On the 27th the gargle was omitted, and mercurial frictions employed on the lateral parts of the larynx, (3i. daily): these were replaced on the 29th by a large blister on the side of the neck.

On May 2d it was noted, that for several days the patient had experienced a trifling oppression in breathing towards evening, and that the canula, which had been introduced in the morning, produced a distinct hissing sound. On withdrawing the instrument, it was found that the end corresponding to the trachea was much obstructed with thick mucus — as soon as a new canula was introduced the hissing sound ceased and the respiration became easy; after this the canula was introduced twice a day, and the dyspnœa did not return.

* * * * *

On the 8th of May the patient began to use a stopper in the canula — the first day it was retained 4 hours.

* * *

From the first of June no new symptoms appeared; and the patient, feeling well in every respect, was anxious to resume his occupation, and for this purpose he left the hospital on the 14th of the month. Still complaining of some hoarseness, and of dyspnœa in ascending stairs, and with the respiratory murmur less distinct than natural. As the canula caused no inconvenience, and the feebleness of the respiratory murmur proved that the larynx was not yet perfectly free from obstruction, he was advised to wear it for fear the dyspnœa might increase.

In fact the patient, who returned to his occupation, was attacked on the 25th June with a progressive dyspnœa: but as soon as the oppression became too great, he had only to withdraw the stopper from the canula; then he could breathe

freely through this passage until, by treatment, the natural passage was again made free. At the present time he still wears the canula. When I last saw him in May, 1838, there still remained some hoarseness and dyspnœa, and as his occupation exposed him to the inhalation of dust, he was advised to change it for a more healthy one.

The above case is important in several particulars: I will, however, only allude to such as relate to the point we are now studying. In the first place, we noticed an almost total absence of the respiratory murmur on both sides of the chest, with a natural resonance on percussion: this fact, taken in connection with others already known, would prevent us from mistaking this for a case of pulmonary emphysema, and would enable us to say with certainty that there was some obstruction in the air passages. But where was the precise situation of this obstruction? This was a very important question to decide at the moment of threatening suffocation. The natural clearness on percussion, the absence of bronchial respiration, of any unnatural resonance of the voice, of any rumbling sound (*ronflement*) in the chest, prove clearly that there existed neither condensation of the pulmonary tissue, nor pleuritic effusion, nor false membranes in the bronchi. At the same time that the change in the voice, the pain in the larynx, pointed to that organ as the seat of the difficulty. The absence of all pain in the course of the trachea would seem to indicate that the disease was confined to the upper portion of the tube. Having established this point, I was induced to fear, from the great feebleness of the respiratory murmur when the patient entered the hospital, that the contraction was already very great, and that the danger of suffocation would compel me to have recourse to tracheotomy. But at the same time, the results of auscultation gave me every reason to think that the operation would succeed, and I should have practised it without hesitation had not M. Velpeau arrived. The result proved that I was right. But the advantages of auscultation were not confined to the immediate success of the operation. It indicated to some extent, even without the aid of the dyspnœa, the degree to which the canula is obstructed, and warned us to use means to counteract its bad effects. Again, the *return* of the respiratory murmur indicated, from day to day, the diminution of the obstruction to the free passage of the air, and that

at the time the patient left the hospital, this obstruction was not entirely removed.

From the preceding cases, I think we may draw the following deductions :

1st. The vesicular murmur of respiration may be diminished or abolished on both sides of the chest, by any lesion capable of narrowing the cavity of the upper portion of the air passages, thus causing the air to arrive with less facility into the bronchi and producing feeble vibrations : or causing this fluid to reach the bronchi in smaller quantity ; or by not permitting it to reach at all the periphery of the lung.

These lesions may occupy any part of the wind-pipe, but the glottis is by far the most frequent seat of them.

They may produce their effect either by narrowing or obstructing the air-tubes, by closing their upper orifice, or by compressing them from without inwards.

Of this character are syphilitic vegetations, (Case II.) various tumours, (Case I.) tubercular ulcerations with projecting edges, and thickening of the submucus tissues, œdematous swellings, and considerable tumefaction of the tonsils, (Case IV.) Of this character also are polypi, in all probability, though experience has not yet furnished me with proof of it ; such as occupy the nasal fossæ, and project into the pharynx, polypi of the trachea, foreign bodies in the air passages, tumours of various kinds which compress the trachea, or project into its cavity through an ulceration in its coats.

The knowledge of this fact is of the greatest utility in the diagnosis and treatment of certain affections of the respiratory organs.

In fact, as many of the above named lesions cannot be ascertained either by the sight or touch, as even œdema of the glottis may exist and the finger be unable to detect it ; many of these affections might thus become confounded with pulmonary emphysema, and patients suffered to die without assistance, when a more accurate diagnosis would have saved them by indicating the operation of tracheotomy.

Again, the continuance or cessation of the respiratory murmur will prevent the confounding spasmodic suffocation with œdema or other mechanical obstruction, (Case VII.) and thus guard against the useless performance of a severe operation.

In the case of a foreign body in the air passages, we may, moreover, determine its precise position, whether in the trachea, or one or other of the bronchi, accordingly as the respiration is diminished on both sides of the chest, or on the right or left side only, — an important decision, as respects the propriety of tracheotomy, and the place for operating.

Finally, in case of croup, would not the simple diminution of the respiratory murmur, and the existence of the peculiar sound noted above, (Case VI.) indicate whether the false membranes were limited to the larynx, or had extended into the bronchi, and thus establish the propriety or impropriety of tracheotomy?

2d. The degree of diminution of the respiratory murmur is the measure of the degree of obstruction; another fact of much importance in prognosis and treatment. Thus in certain apparently severe cases, as of plastic angina, the greater or less distinctness of the respiratory murmur will show that the danger is not really great. The hope of a happy termination may be entertained as long as this murmur continues strong.

On the other hand, a feeble respiratory murmur will render the prognosis unfavourable, for the patient is threatened with suffocation. *Thus then the activity of the treatment must be proportioned to the indistinctness of the vesicular murmur, which will, even alone, sometimes indicate the necessity of tracheotomy.*

REVIEWS

AND

BIBLIOGRAPHIC NOTICES.

- I. *Maladies des Enfants. Affections de Poitrine. Première Partie. PNEUMONIE.* Par M. M. RILLIET and BARTHEZ. (A Treatise on the Pneumonia of Children.) Paris, 1838. 8vo. pp. 232.
- II. *A Treatise on Diseases of the Chest, and on Mediate Auscultation.* By R. T. H. LAENNEC, M.D. Translated from the third French edition. By JOHN FORBES, M.D., F.R.S. *To which is added the Notes of Professor Andral.* Translated and accompanied with Observations on Cerebral Auscultation. By JOHN D. FISHER, M.D. New-York, Samuel S. and Wm. Wood, 1838. 8vo. pp. 782.
- III. *An Elementary Treatise on Auscultation and Percussion, or the Application of Acoustics to the Diagnosis of Diseases. With a Synoptical Table.* By A. RACIBORSKI, M.D. Translated, with Notes, by MINTURN POST, M.D. New-York, Collins, Keese & Co. 1839. 8vo. pp. 261.

A NEW work on the Pneumonia of Children, purporting to be founded on clinical and *post-mortem* examination, was welcomed by us with great pleasure, and an attentive perusal of it has not, on the whole, disappointed our expectations. The professed treatises on the diseases of children contain almost nothing of value on this subject; the latest we have seen, that of Drs. EVANSON and MAUNSELL, despatches the whole matter in less than two pages; but even that little is enough to convince us of the small degree of practical information the authors possess on the subject. The only really valuable essays on the pneumonia of children we have ever yet met with in our own language, are

those of Dr. Gerhard of Philadelphia, published in the American Journal of Medical Sciences for 1834-5. These essays, although evidently the result of much observation, are yet imperfect in some important particulars. This author observed the disease in the Children's Hospital of Paris, among the squalid and impoverished offspring of the lower classes, and often only at a late period in its progress; hence Dr. Gerhard saw only its more chronic form.* He gives us no account of that rapidly fatal pneumonia which we have seen run its course in forty-eight hours; which, so far from attacking the feeble, and those suffering from previous disease, seizes upon those in perfect health, and crushes them by its sudden violence.

We are indebted to M. M. Rilliet and Barthez for having pointed out this distinction in the pneumonia of children; a distinction the more important because nothing of the kind exists in the adult. The work we are examining is based upon these facts:

"The cases of pneumonia which occur during the progress of some chronic disease, assume, also, the chronic form. This is peculiar to children under six years of age."

"The cases, on the contrary, which occur in children while in good health, or during some acute disease, assume the acute form."

Thus a child who has been suffering from a long-continued diarrhœa, the consequence of dentition, or from the debility and derangement of the general health that not unfrequently follows measles, smallpox, or scarlatina, will be attacked by a pneumonia which will develop itself slowly, and with very few well-marked symptoms, and continue two, three, or four months, before its termination. Another child in perfect health, or suffering under an actual attack of measles, &c., will be suddenly seized, will present the most marked constitutional and other symptoms, and die in a few days, presenting, on *post-mortem* examination, as extensive pulmonary inflammation as the former case.

This important practical distinction being then established, let us go on with M. M. Rilliet and Barthez, and begin, as every one must, who aims to attain to a positive knowledge of disease, with the morbid anatomy of the pneumonia of children. It is generally believed that this disease attacks separate lobules of the lung; so that, instead of finding evidences of inflammation over a continuous surface, as in the adult, we discover small indurated masses in different portions of the pulmonary tissue,

* We refer here, and also in our subsequent remarks, to Dr. Gerhard's second essay, or that on the *Pneumonia of Children under six years of age*. Indeed, this is a capital distinction; for, after this period, the disease commonly resembles that of adults.

which, when examined, prove to be distinct lobules, surrounded by other lobules, free from, or much less affected by, inflammation; although in advanced cases of the disease, when the inflamed lobules are multiplied, this primary disposition is no longer recognised with ease, and constituting the "lobular pneumonia generalized" of the authors before us. They, however, do not admit that the disease in young children always assumes this primary form, although they admit its frequency at this period. Thus, in twenty-four cases of lobular pneumonia, twenty-two were under the age of six years; in fourteen cases of lobar pneumonia, seven were under this age. It would then appear, that while the lobular form is seldom found after the fifth year, the lobar form, resembling that noticed in the adult, is met with in a very considerable proportion of cases. The observations of M. Valleix, at the Foundling Hospital of Paris, on new-born children, confirm entirely this fact. There is, however, no real difference in the nature of these two forms of the disease, although it is important to remember that the lobular form is frequently latent at its commencement, owing to the uncertainty of the physical signs on which, as we shall soon see, the diagnosis is principally founded. The following is the author's description of the morbid appearances in the lobular pneumonia:

"The exterior of the lung is generally soft and flaccid, its general colour is a more or less marked grayish-rose, but in different parts are to be noticed circumscribed prominent spots, of a violet-red colour, which are firm when pressed by the fingers. These spots are commonly circular, but sometimes elongated, especially from above downward, and are commonly found in the posterior half of the lung, although they are sometimes observed in other portions of the organ. In some cases they do not appear externally, but, in pressing the lung, the indurated masses are felt, situated more or less deeply below the surface."

"If we make an incision in the lung, the cut surface appears marbled with spots of a grayish-rose and of a deep violet colour. It is evident that the dark spots noticed upon the external surface of the lung penetrates its substance, and that they, as well as others which are situated in the central portions of the organ, are the result of an inflammatory action, differing, in no material respect, from that affecting the same tissue in the adult, equally presenting a smooth surface when cut, a granulated surface when torn, being friable, and sinking in water."

Like the pneumonia of the adult, it presents three distinct stages:

"In the first stage, the cut surface of the lung is marbled with spots of a grayish-rose and red colour; these red spots are more or less circumscribed, and are rather more easily torn than the healthy tissue; but floating in water, yielding, when pressed, an aerated liquid, and still crepitating."

"The second stage is that most commonly met with, and is that already described as resembling the hepatization of adults."

The third stage, or that of suppuration, might easily be overlooked in the *post-mortem* examination, especially when the inflamed spots that have passed into the third stage are small; the substance of the lung has regained the grayish colour which belongs to its healthy state, so that, if it requires attention to recognise the second stage, where the change of colour in the portions affected is distinct, how much more difficult must it be to distinguish a lesion in which this important distinction is wanting. But, by close attention, some lobules will be observed more prominent than the rest, instead of being flaccid, like those around them; and, on pressing them, they discharge a purulent fluid."

In certain cases, even abscesses may form :

"If the lobular pneumonia has passed into the stage of suppuration, and to the formation of abscesses, the cut surface of the lung will present cavities varying in size from a hemp seed to that of a large pea; these are filled with pus, which is sometimes mixed with clots of blood. Sometimes they communicate with the bronchi, and sometimes they do not."

Suppuration in this form of disease has been generally regarded by pathologists as of very rare occurrence, yet our authors have met with it eleven times in forty-three cases, and principally, if not constantly, as a consequence of the lobular form. The possibility of the fact we have established by our own dissection. In a recent case, occurring in a child ten months old, and who died on the 15th day of the disease, the whole upper and middle lobe of the right lung was found in a state of commencing suppuration. There can be no doubt, however, that this condition of the lung is of rare occurrence. The acute form is too rapidly fatal in its progress, and the chronic possessed of too little of the active inflammatory character, to permit its development.

There are two other forms of pulmonary inflammation described by our authors. The first appears to be the most simple form of inflammation of the air-cells :

"The lung, examined externally, is soft and flaccid; when cut, it presents a large number of granulations, about the size of a millet seed, and of a yellowish-gray colour. At first sight they might be mistaken for miliary tubercles, equal in size, and scattered through the substance of the lung; but this error is easily corrected, for the two kinds of granulations differ as widely in their physical properties as in their real nature. The crude tubercle is firm and solid, the granulations the result of inflammation contain a fluid, and when cut, discharge a drop of purulent matter."

Another condition of the lung, remote from the preceding, is called by our authors, carnification :

"The lung, in this condition, is soft, flaccid, and shrunken; of a violet colour, and marked with whitish lines, which indicate the divisions of the lobules; it does not crepitate on pressure. When cut, it presents a red and smooth surface; it is not very friable. When pressed, it discharges a bloody unaërated serum. It resembles very much, in appearance, the more compact muscular tissue."

The nature of this change in the structure of the lung is not well understood. M. M. Rilliet and Barthez are disposed to regard it as the consequence of chronic inflammation.

It is, we believe, the common opinion among pathologists, that inflammation of the pleura rarely exists as a complication in the pneumonia of young children. Dr. Gerhard insists particularly on this point, and M. Valleix, in his recent work, confirms this opinion. We all know how common this complication is in the pneumonia of adults. According to M. M. Rilliet and Barthez, the pleura was found unaffected in only ten cases. Signs of acute pleurisy even existed in one-third of the children from two to five years of age.

Dilatation of the bronchi was also noticed in a considerable proportion of the cases, a condition, according to our authors, probably dependent upon the mechanical distension of these tubes by mucus.

Inflammation of the bronchi, to any appreciable degree, is not common in the pneumonia of young children. At all events, it is difficult, according to our authors, to assure ourselves of it by *post-mortem* examination. We have noticed this fact: in cases where the disease had assumed the chronic form, the bronchi, so far as they could be examined, even those passing directly into the inflamed portion of the lung, are found natural in appearance. In the acute form, the bronchial tubes, and even the trachea, are found to have been much inflamed.

There is one other class of lesions too important, as well as frequent, considered in connection with the pneumonia of young children, to be passed by without notice, and this is the inflammatory and other affections of the mucous membrane of the intestinal canal, especially of the large intestines.

"The mucous membrane of the intestinal canal was found so often diseased, that it could be regarded as healthy in only 9 of the 43 cases. In most of them, especially where the large intestines were affected, the changes were of a chronic character, and consequently of older date than the pneumonia."

The third chapter is devoted to the consideration of the *physical signs* of pneumonia in children. This is unquestionably the most important portion of the whole subject, and it is to be regretted that M. M. Rilliet and Barthez in their wish to be accurate, have gone beyond this point by

indulging in refinements which are of no practical value. It is the opinion of some authors who have written upon the diseases of children, that no great benefit can be derived from auscultation in their diagnosis. This opinion is partly true, but in a greater degree is false. Every one in the habit of studying the physical condition of the chest in young children, must know how difficult a thing it sometimes is to keep them sufficiently quiet to permit a careful examination. An examination conducted by force, amid cries and struggles, can lead to no definite results. On the other hand, every one must have noticed when the child is quiet, in how well marked a form all the physical signs present themselves — that the modifications of the sound on percussion, and of the respiration, are both more distinct than in the adult. We must, then, make this important distinction, and admit the fact, that actual organic changes in the pulmonary tissue, reveal themselves as distinctly in children as in adults, when the circumstances are equally favourable for a careful examination.

We have already remarked that our authors had refined too much in this portion of their work. The following is a summary of their opinions in relation to the physical signs :

“ *In lobular pneumonia*: mucous or subcrepitant rattle mixed at times with a very dry rattle; harsh respiration; expiration prolonged or bronchial; clearness on percussion.”

“ *In lobular pneumonia that has become generalized*: mucous or subcrepitant rattle with bronchial respiration over a considerable surface, or extending rapidly; flatness on percussion.”

“ *In lobar pneumonia*, (i. e. inflammation extending over a continuous surface as in the adult:) crepitant or subcrepitant rattle; bronchial respiration; flatness on percussion.”

It appears to us in reviewing this part of the subject, that the only clear and unequivocal signs of pneumonia, are such as result directly from obstruction of the pulmonary tissue, viz. : flatness and bronchial respiration; except in the small proportion of cases where the true crepitant rattle is noticed. It is true that the peculiar form the disease is so apt to assume in young children, the lobular pneumonia, may sometimes prevent an early diagnosis: for a few inflamed lobules, surrounded by a healthy tissue, would hardly produce either of the above signs. Our authors are, however, of opinion that the physical diagnosis can be established before they occur; and in this we think they have advanced a step too far. The attempt to found the diagnosis upon the existence of a mucous or subcrepitant rattle is what we particularly have in view. These rattles existing on both sides of the chest behind, accompanied by clearness on percussion, are unquestionably an evidence of simple bronchitis

in adults, and probably also in children. That bronchial respiration and flatness sometimes succeed to these is very true. Indeed, nothing is better known than that pneumonia sometimes succeeds to bronchitis, but these are exceptional cases, and not the general rule. A mucous or subcrepitant rattle existing *in one lung* is a more important sign, inasmuch as these rattles in bronchitis are *always found on both sides*. But it would appear, from an examination of numerous cases, that the pneumonia of children is frequently double, more often, at least, than that of adults: hence a subcrepitant rattle, on one side, indicating the formative stage of pneumonia must be a comparatively rare occurrence. Again, can we derive any indication from the crepitant rattle which in adults is so characteristic of the early stage of this disease? According to Dr. Gerhard this rattle seldom or never occurs in children under six years of age. We have long known this to be an error, having not unfrequently heard it. M. M. Rilliet and Barthez also contradict this statement, since it was noted by them nine times among the younger children, and always at the same time with the bronchial respiration, except in three cases. This rattle then even when heard alone in the early stage of the disease and can leave no doubt of the existence of a pneumonia.

We have remarked, also, that the bronchial respiration is the only modification of the vesicular murmur that can clearly indicate the existence of pneumonia. Our authors contend that there are earlier changes which can be recognised — as a harsh respiration and a prolonged expiration, unaccompanied by flatness on percussion: these are probably refinements which, when they exist, may lead to the suspicion that pneumonia also exists to a small extent, — nothing more. But we are now speaking of the positive signs of disease. The flatness on percussion is the next of these positive signs, appearing to us to accompany the bronchial respiration in degree and extent, except in certain cases of great condensation of the pulmonary tissue, where the respiration ceases entirely, from a complete obliteration of the bronchi. But it is important to remark here, that flatness on percussion and bronchial respiration, taken by themselves, do not necessarily point out the existence of pneumonia, but simply the condensation of the pulmonary tissue, from a deposit into the substance of the organ obliterating the air-cells. In all these cases, there are points to study beyond the mere recognition of certain sounds which form but the mechanical part of the science of auscultation. The precise seat of the disease, the rapidity of its developement, its accompanying symptoms, are all points of the highest importance to a perfect diagnosis. We would here only remark, that numerous dissections have

shown that in children, pneumonia affects the posterior half of the lung, and generally, even in the lobular form, the inferior rather than the superior portion; but to this latter position there are exceptions;—pneumonia, commencing in the superior portion of the lung, is probably more common in young children than in adults.

According to the statement of Dr. Gerhard, the pneumonia of young children is commonly double, commencing in both lungs about the same time. This statement is true as to the anatomical fact, although less generally so than Dr. G. supposes: but dissection commonly presents the disease more advanced in one lung than in the other, proving clearly that both did not become affected at the same time. The importance of this fact, both in the early diagnosis of the disease, and at a later period, is too clear to require comment.

The next subject that occupies the attention of our authors, is an examination of the *rational signs* of the disease. They justly remark that there is nothing in the countenance of young children characteristic of pneumonia, although there commonly is abundant proof of obstructed circulation, indicated by a dilatation of the *alæ nasi* before inspiration. They might also have noticed, we think with propriety, the mingled paleness and lividity of the countenance—lividity especially of the lips and eyelids, which is so often present in the later stage of the disease.

“The pulse was always counted: it was rarely below 120, and in the youngest children it varied from 140—150—180. In children from the age of 6 to 15 years, it was much less accelerated, rarely reaching 140: but on the day of the attack it was commonly 120.”

“In most cases, at the commencement of the disease, it presented nothing peculiar in its character. It was commonly full and regular in children between the age of 2 and 5 years. A day or two before death it became extremely small, and sometimes nearly imperceptible.”

“The number of inspirations in children from 2 to 5 years old, varied from 30 to 80 a minute; in those who were older, from 6 to 15 years, it varied from 24 to 68 a minute. In one half of the cases, the respiration presented no other change than this increased frequency; in the remainder, without regard to age, we noticed the following: in some cases it was expressive of anxiety, very full, elevating the whole thorax; in other cases it was abdominal: again it was irregular and unequal; finally, in some cases, the inspiration was natural, but the expiration was difficult, attended by an effort.”

Our authors remark that they have generally found the acceleration of the pulse and of the respiration, to be proportioned to each other, and to the extent and violence of the local disease, but this does not apply to complicated cases, or to the later period of the disease.

The cough was absent in two cases, and in the remainder it was trifling.

In more than one-half of the cases it was infrequent, almost always it was dry. In children from 2 to 4 years of age, it always *preceded* the evidences of pneumonia by several (8) days. In the older children the cough and the symptoms of pneumonia commenced together.

It is important to observe in the diagnosis the difference between this dry and trifling cough, — and the loud, frequent, moist cough of common bronchitis.

Expectoration was noticed only four times in the children between the age of 2 and 5 years; in none of these cases was it characteristic.

It is very difficult to ascertain whether children actually suffer from pain in the thorax.

Considering the comparative rarity of pleural inflammation in such cases, it is probably seldom present.

The position which young children assumed in bed was noticed, — they commonly lay upon the back, or indifferently on either side.

“The functions of the respiration and of the circulation were not alone affected. The nervous system which is so subject to impressions in children, sympathized with the principal disease in two-thirds of the cases among the younger class of children, and in one-half of those from 6 to 15 years of age. Among the former class the most frequent symptom was restlessness, which was sometimes extremely marked, and which commonly accompanied the earlier symptoms of the disease, but seldom continued through its whole progress: this symptom was generally marked in proportion to the extent of the disease. Other patients, instead of exhibiting this restlessness, became oppressed with drowsiness and stupor. In two of these cases, the patients were attacked while in good health and the hepatization affected an entire lobe of one lung.”

“The patients from 6 to 15 years of age, and particularly those among the youngest of this class sometimes exhibited an extreme degree of restlessness or even delirium. In other cases, where the pneumonia existed as a complication, we noticed a great loss of strength, vertigo, &c.”

More than three-quarters of the patients between the age of 2 and 5 years, presented some derangement of the digestive organs. Most commonly they had diarrhœa: this was trifling in some cases, and abundant in others. It was frequently during its progress that the pneumonia supervened. The abdomen was soft upon pressure, and with or without tumidity. The tongue was commonly moist and frequently covered with a white or yellowish coat. Vomiting rarely occurred, and in the more chronic cases the appetite continued: but in the acute cases it was entirely lost, and the thirst was excessive. In the older class of children the condition of the digestive organs did not materially differ from what is commonly noticed in the pneumonia of adults.

We have already alluded to the important distinction introduced by

our authors in their description of the pneumonia of young children. The more protracted form so well described by Dr. Gerhard, and the acute form of which this author has made no mention. After the review we have already given of the principal anatomical features of the disease, and of the individual symptoms considered independently of their connection with each other, it will be well we think to present to the reader a *tableau* of the disease as it appears under the two forms noticed above.

I. "The more *chronic form* is peculiar to the youngest children. It commonly supervenes to a chronic enteritis, a very frequent disease in young children. Sometimes it makes its appearance after an attack of one of the eruptive fevers, but a long time after the eruption has disappeared. Occurring in children whose constitutions have been already impaired by disease, it does not discover itself by any very strongly-marked symptoms. The cough is not frequent, — in some cases it is entirely wanting; there is no pain in the chest, no expectoration; the skin is pale and cold, the face and extremities œdematous. When, however, the disease is more advanced and the lung is more generally affected, reaction commonly ensues, the skin becomes warm, the pulse and respiration accelerated."

"The disease would often continue completely latent, did not auscultation come to our aid, and disclose to us the physical signs of pneumonia, which we have already enumerated and which it is unnecessary to repeat."

"Notwithstanding the diarrhœa which is commonly profuse, the appetite often remains good and the thirst is not increased; the skin sometimes becomes covered with biles and spots of ecchymosis, ulcerations appear either upon the sacrum or upon the surfaces, that have been blistered; the emaciation constantly progresses, and the child finally dies in the last stage of marasmus. The progress of this form of the disease is slow, but its actual duration cannot be easily ascertained."

II. "The *acute form* attacks children in perfect health, or during the progress of some other acute disease. It exhibits the same features in children from two to four years of age. In those who are older, from five to fifteen years, it becomes somewhat modified in its progress."

"In the younger children it presents two well-marked periods. The first of these may be called the catarrhal, the second the inflammatory. The duration of the first varies very much; still we can always recognise its existence. We notice a cough, which is commonly not severe, and some slight changes in the respiratory murmur; a sibilant or sonorous rhonchus, a mucous rattle, &c.; but no acceleration of the pulse or of the respiration; the appetite remains good; the child continues its sports; but, after a time, the pulse and the respiration become suddenly accelerated, the skin hot, the *alæ nasi* much dilated, the countenance anxious. In some cases there is great restlessness, in other cases, on the contrary, there is a disposition to stupor. If auscultation be resorted to at this period, we discover nothing but a feeble respiration, or a subcrepitant rattle — there is no flatness on percussion: but, after a time, the expiration becomes prolonged, and soon a well-marked bronchial respiration ensues

accompanied by flatness; the constitutional symptoms continuing unabated so long as the disease is progressing."

"As the disease approaches its fatal termination, the pulse and the respiration become irregular, the former losing its force and becoming extremely small, the countenance assumes a livid hue, the extremities grow cold; prostration takes the place of restlessness, the cough ceases, the little patients gape frequently, and utter deep sighs, the pulse becomes imperceptible. The progress of the disease is sometimes so rapid that death ensues in two or three days."

"When the disease terminates favourably, the subcrepitant rattle which had given place to the bronchial respiration returns, the latter becomes limited to the root or the summit of the lung, and the natural murmur of respiration is again heard. At the same time, the constitutional symptoms lose their intensity; the pulse and the respiration become more slow, the hot skin becomes moist, the restlessness ceases. The period of resolution commences from the 7th to the 9th day of the disease; but it seldom happens that the respiration becomes perfectly pure before the 20th day."

"The above history belongs, especially, to the pneumonia of children between the age of 2 to 4 years. The disease in older children, from 5 to 15 years, is different in some important particulars: like it, however, it may occur during the progress of another disease, or attack those in perfect health. If the previous disease is a catarrhal affection, we shall have the two periods already noticed as occurring in the younger class of children; but if the previous disease has not this character, the pneumonia will be characterized by no well-marked symptoms. There will be but little cough, no pain in the chest, no expectoration; and as the inflammation of the pulmonary tissue is developed during the progress of a disease itself attended by febrile reaction (smallpox, typhus,) the acceleration of the pulse, and of the respiration, would hardly excite a suspicion. But, as will be seen by referring to our cases, the evident alteration in the expression of the countenance is too important as marking the onset of the pneumonia, to be neglected."

"But in other cases, occurring among the older class of patients, and where the pneumonia is uncomplicated with any previous disease, it resembles perfectly, that we witness in adults, being ushered in with fever, thirst, loss of appetite, pain in the head, cough, stitch in the side, and sometimes by vomiting. Auscultation discovers the crepitant rattle, the bronchial respiration, bronchophony and flatness on percussion, the expectoration is often bloody, but it is seldom rusty and characteristic; the pulse and the respiration are considerably accelerated; the nervous system is affected, as is indicated by the headache, restlessness, and even delirium. According to Drs. Gerhard and Ruz, the medium duration of this variety of the disease, is 14 days. In the few cases that have come under our notice, its duration was much longer."

The 8th chapter is occupied with an attempt to establish the diagnosis of pneumonia from other pulmonary diseases, especially from pleurisy, bronchitis, and phthisis.

With regard to the first of these, pleurisy, they offer absolutely nothing

except the statement that this disease, in its simple form, is of very rare occurrence, especially, in the younger class of children: it is commonly a complication of pneumonia. Under such circumstances, the bronchial respiration, has appeared to them to be succeeded by an absence of all respiration, thus indicating the supervention of an effusion into the cavity of the pleura. We wish to offer some remarks on this subject, our observations having led us to a different conclusion. We have been in the habit of observing among the younger class of children, in the habitual enjoyment of good health, a form of disease coming on suddenly with more or less febrile excitement, and accompanied, from a very early period, by marked flatness all over the affected side, and by a distinct and equally general bronchial respiration, unmixed with any kind of rattle. At first, we supposed these cases to be pneumonia, judging principally from the bronchial respiration, which appeared sufficiently superficial: but the extent of the flatness, occupying the whole of the affected side, — while in ordinary cases of pneumonia, it hardly ever passes the median line from behind forwards, — the rapidity with which this flatness occurred, while, at the same time, the constitutional symptoms were commonly far less intense than might have been anticipated from an inflammation of the pulmonary tissue, so rapid in its progress, and so extensive — these circumstances led to the strong suspicion that the case was a pleurisy, with effusion compressing the whole lung to a certain extent, and not pneumonia. The careful watching of such cases, and the observing that the mode of resolution corresponded precisely with that noticed in ordinary pleurisy, — the flatness diminishing from above downwards, and from before backwards, the respiration returning to its natural condition without the complication of the subcrepitant rattle, the existence of which is so constantly established during the resolution of ordinary pneumonia — these facts would seem proper to confirm the opinion expressed as to the nature of the disease. Such cases have so rarely terminated fatally, that *post-mortem* examination has not yet enabled us to gain much information from this important source. In a single case, the diagnosis appeared to be confirmed by dissection. It is probable that two elements unite in the production of the physical signs in the pleurisy of young children: first, the incompressibility of the pulmonary tissue; second, the small quantity of effused fluid. It will not be difficult, with these conditions existing, to conceive how the superficial portion of the lung, especially the air vesicles, should be moderately, yet generally compressed, and that general flatness with bronchial respiration should become physically possible. Indeed, in certain cases of pleurisy in the adult, this state of things has been noticed.

Our authors offer no distinctive signs by which acute bronchitis can be distinguished from the early stages of pneumonia, except the absence of fever and of other constitutional symptoms. We believe, however, that the acute catarrh of children is sometimes attended with very marked febrile excitement; but the great error into which M. M. Rilliet and Barthez have fallen, is in refining so much in relation to the earlier physical signs of pneumonia, most, if not all of which belong to bronchitis, and are distinctly to be referred to it so long as it remains a simple disease, viz.: the sibilant and sonorous rhonchi, the mucous or subcrepitant rattles heard over the posterior, and especially the inferior portions of the chest and on *both sides*, with clearness on percussion; — these are the physical signs of bronchitis in children as in adults; — that these signs are succeeded in many cases by flatness on percussion, and by bronchial respiration, proves only that pneumonia frequently succeeds to bronchitis, a fact now generally acknowledged, and leading to a great practical inference, the necessity of guarding, by early and appropriate treatment, against the extension of the inflammatory action to the air-cells. The fact we have stated above in relation to the developement of the mucous or subcrepitant rattle must be constantly remembered; — in bronchitis this rattle is *always double*, — always heard on both sides of the chest behind, when it is heard at all, for it is commonly absent in mild cases; when then, it is heard over the inferior portion of *one lung* at the early period of an acute attack, the inference is, that pneumonia is not merely to be feared, but that its rapid developement is almost certain. No law is more uniform than that bronchitis affects both lungs, and at the same time. It is true, pneumonia may do the same, but this is not constant, even in children, nor is it even the general law.

Is it possible to distinguish an attack of pneumonia, especially of the more chronic form, from tubercular phthisis? The remarks of M. M. Rilliet and Barthez, accords perfectly with what we believe to be the truth, and are worthy the most careful attention.

“The diagnosis is often very difficult, especially in cases where we are unable to obtain any very satisfactory information in relation to the commencement and the progress of the disease. Let us suppose one of these cases, — we are called to examine a child, on whom we notice a high degree of febrile excitement, with flatness and bronchial respiration under one of the clavicles, — is this a case of pneumonia? We have often heard such a case called so and treated accordingly, and yet, in a very large proportion of such cases, the diagnosis was incorrect, and *post-mortem* examination established the existence of tubercles. Reference to the 43 cases in the table will show that in two cases only was the pneumonia confined to the anterior portion of the lung, and

in but one of these was it situated in that portion of the lung corresponding to the subclavicular region. If, however, the proofs of idiopathic pneumonia are rarely found in the anterior-superior portion of the lung, they are sometimes found there in cases when pneumonia supervenes upon the existence of tubercles. But in young children, the tubercles, instead of having their usual seat, (the antero-superior portion of the lung) are sometimes scattered throughout the pulmonary tissue; or when seated in the posterior portion of the lung, — if they become surrounded by inflammation, — then the diagnosis is far from being easy."

Indeed, in this latter case, the diagnosis would appear to be impossible. When tubercles are scattered throughout the pulmonary tissue, our authors thinks their existence is indicated by a harsh respiration, but this is probable a refinement in auscultation of no practical value. Again, there is another difficulty in the diagnosis of pneumonia from phthisis, — both are frequently accompanied by a profuse diarrhœa — in the former case the diarrhœa always precedes the symptoms of pneumonia, but it may also precede those of phthisis.

But, after all, these are exceptionable cases, important to be recognised by him who intends to penetrate beyond the surface in the study of this important class of diseases, — they are not illustrations of the general rule. The truth is, the diagnosis is in most cases sufficiently easy, if proper attention be bestowed, and let it be remembered, that our chief dependence is upon the physical signs, — let us remember that pneumonia commonly first affects the inferior and posterior portion of the lung, while tubercles fix themselves in precisely an opposite situation — the anterior-superior portion; — flatness then and bronchial respiration below and about the lower angle of the scapula, affords a strong indication of the former disease; the same signs under the clavicles indicate the latter. The rational and constitutional symptoms, important as they may be, can avail us but little in the diagnosis, not because they are wanting, but because they resemble each other too nearly in their *ensemble* and progress in the two cases.

A chapter of the work is devoted to the *prognosis*, and another to the *causes* of pneumonia. In relation to the first point, nothing new is advanced; the great mortality of both forms of the disease in the younger class of patients, (2 to 5 years,) is admitted by all accurate observers. The chapter, however, on the causes of pneumonia, contain some facts of considerable interest, which we will enumerate. In the first place, the fact so much insisted on by Dr. Gerhard, that pneumonia is rarely developed in healthy children, is confirmed by our authors' observation, but we have already stated our opinion, that this fact applies chiefly to

hospital cases. Again, the comparative frequency of the disease at different periods of childhood, is illustrated by the following statement. M. Hache, in 800 *post-mortem* examinations, met with pneumonia 71 times in children, from 2 to 5 years of age, and only 37 times in those from 6 to 15 years of age. And our authors' remark, that in 60 cases of pneumonia, 40 were between the age of 2 and 5 years, and 20 between the age of 6 and 15 years, and yet more patients of the older class are admitted into the wards.

The influence of temperature and season upon the developement of pneumonia is not yet settled by observation. It is evident, that the true effect of these causes can only be estimated in the more simple and acute form of the disease, which is rare in hospitals where statistical tables can alone be kept; in 13 cases of this description, 5 occurred during the month of February, but the influenza was epidemic at the same period.

Finally, measles, of all other diseases, appeared to operate most powerfully in the production of pneumonia, especially among the younger class of children: thus, in 29 cases of this class, 11 were referred to this cause; and among the older children, 4 in 13 cases. Chronic enteritis also, as we have already stated, not unfrequently preceded the developement of the pneumonia in the younger children.

It is common, and we believe correct, to find fault with French therapeutics. Their best authors, while they give us most admirable and minute descriptions of disease, are yet sadly deficient in relation to treatment. M. M. Rilliet and Barthez, form no exception to this rule, so that after the copious extracts we have already made, we shall pass rapidly through this portion of the work.

Our authors appear to have a very limited faith in the efficacy of blood-letting; in the acute form of the disease, however, they recommend its moderate employment; in the more chronic form they proscribe it altogether, — they advise the use of the tartar emetic, — they have used the white oxyde of antimony, (*pulvis antimonialis*?) and kermes mineral, but with less advantage, — they are opposed to the use of blisters. The secondary treatment consists of mucilaginous drinks, opiates, and sometimes tonics. The following remark we deem worthy of a careful attention: —

“Whatever kind of treatment was employed, the symptoms of amendment began to show themselves in a very large proportion of cases about the same period of time, that is, from the 7th to the 9th day of the disease. This fact would appear to prove that the disease has a period of increase which it must pass through, and which no mode of treatment can prevent.”

The following is the summary of the treatment recommended by our authors : —

“In the more chronic form of the disease, that which has supervened upon some other chronic affection, we ought not to have recourse to an active treatment of any kind, but should endeavour to improve the general health. For this purpose, we should attend particularly to matters of hygiene, taking care that the child does not lie constantly on the back, and paying the utmost attention to cleanliness. We recommend the use of mild tonics, and as the appetite is commonly good, nourishing food in small quantities. The existence of a diarrhœa is not an objection to this course, for this symptom in children is not always dependent upon inflammation, it is commonly connected with the white softening of the mucous membrane of the intestines, which is rather the result of debility than of inflammation. As an external tonic we may use the sulphur bath.”

“When the pneumonia has supervened upon an acute disease, we should not recommend bloodletting ; we should prefer the tartar emetic, using it in large doses proportioned to the severity of the inflammation, and without any regard to any trifling derangement of the digestive organs which might at first seem to contra-indicate its use : in cases where this mode of treatment does not seem proper, we would recommend the kermes mineral, also in large doses.”

“Finally, in the simple acute form of the disease, we would recommend a mixed treatment, — bloodletting and the tartar emetic combined, guarding against the too free use of the former, adapting it, however, to the severity and extent of the inflammation.”

We can find no reasonable objection to the treatment recommended in the acute form of the disease, except to express the fear that our authors might justly be accused of timidity in the use of so important a remedial agent as bloodletting ; while no one can doubt the propriety of adapting a remedy to the extent and violence of the disease, yet we must remember, that, in the present instance, we have one often extremely rapid in its progress, and at the same time decidedly and simply inflammatory in its nature ; if bloodletting is ever beneficial, why should it not be so in such cases ? The recommendation of the free use of the tartar emetic, we fully agree with ; an unreasonable prejudice against its use exists in many of our practitioners. Opium and counter-irritation of any kind we believe to be every way objectionable.

Nothing can be more inefficacious than the treatment recommended in the more chronic form of the disease : *la médecine expectante*, for which the French have been a good deal laughed at, and often unjustly, can hardly succeed in a disease which insidiously but powerfully seizes upon a vital organ ; and the result proves this, — the *expectation* is only awaiting for death. The principles of treatment stated in the paper of Dr.

Gerhard, appear to us equally incorrect, if not equally inefficient ; it is but justice, however, to state, that this excellent writer has not given us his own opinions, but simply the practice of the hospital where he observed the disease.

“The antiphlogistic treatment was pursued ; but in the cases I witnessed no blood was taken from the arm ; either scarified cups, or what is better, leeches were applied to the thorax, in numbers varying from 2 to 8. External revulsion by blisters, poultices, and sinapisms was frequently used, and small doses of opium with demulcents given as internal remedies. *The success of these means was so small, that their analysis would hardly lead to any results.*”

After making due allowance for the gravity and often hopelessness the cases admitted into the wards of the hospital, still, we cannot help believing that a treatment founded on a different principle would have been met with better success. We certainly have not found this chronic form the disease so intractable and almost uniformly fatal, although often extremely tedious and protracted in its cure. The error, we conceive, is in treating the disease as an *acute disease* ; it is not so. Independently of its attacking the debilitated by previous or bad nourishment, it is in itself entirely destitute of every claim to be regarded as an active inflammation : — its slow developement, — its indisposition to pass into the stage of suppuration, the character of the constitutional symptoms all prove this, and the indications in the treatment are *stimulating* and not antiphlogistic. We have, it is true, found advantage in commencing the treatment by overcoming the slight febrile excitement that sometimes prevails, by the application of a few leeches, the warm bath, and sometimes small doses of antimony ; but this indication, when it exists, may be very speedily accomplished, — we then have recourse at once to the stimulating expectorants, of which Coxe’s hive syrup appears to us the best, and in frequent and as large doses as can be borne without nausea ; to small doses of calomel and Dover’s powder ; to external stimulants, as blisters, and especially the tartar emetic ointment ; to the warm bath rendered also slightly stimulant, by the proper regulation of its temperature, &c., or by medication, — with a mild, but as nutritious a diet as the condition of the digestive organs will allow. We believe that this mode of treatment will very often succeed where grave complications do not exist, and where the constitution still retains a certain degree of vigour.

We have discussed very fully the subject of pneumonia in children, both by extracts from, and comments upon the statements of the authors before us, with the former of whom we once had the pleasure of an acquaintance, and from whose hands we have re-

ceived former acts of kindness. It is with no small degree of pleasure that we again express our sense of obligation, as well as the satisfaction we have had in the study of the work before us; we are sure that the authors have contributed their share towards the more perfect understanding of a difficult subject.

It would be a superfluous task to offer an analysis of the immortal work of Laennec, or to praise the excellent translation by Dr. Forbes; both have been long before the profession, both are justly esteemed. We wish simply to announce the new edition with the translated notes by Professor Andral, and to express our conviction, that the work, in its present improved form, is by far the most complete work in our language on the diseases of the chest.

The translation of Raciborski's work on Auscultation, by Dr. Post, we have examined with attention, and have no hesitation in expressing our favourable opinion as to the merit of both the original and the translation. Having been once a pupil of the author, we can testify from personal experience, to his practical ability, as well as to the opinion generally entertained at Paris, that his work was superior to any of the kind in use there. We will venture, however, to express the opinion that the translation, when it passes to a new edition, would be much improved by being condensed very considerably in its matter, and by being printed in the smallest type that is distinctly legible. Works of this kind make no pretensions to new discoveries which may require much illustration, but are intended to refresh the memory in relation to well established facts; they should then be books of easy reference, and so small in size as to be carried in the pocket.

J. A. S.

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- I. *A Treatise on the Nature of Club-Foot and Analogous Distortions; including their Treatment both with and without Surgical Operation. Illustrated by a Series of Cases, and numerous Practical Instructions.* By W. J. LITTLE, M.D., &c. &c., London, 1839, 8vo. 276 pages.
 - II. *A Lecture on Loxarthrus or Club-Foot*, by THOMAS D. MUTTER, M.D., Lecturer on Surgery, &c., Philadelphia, 1839. Hooker & Claxton, 8vo. pp. 104.

WE have been much gratified and instructed by an attentive perusal of the works whose titles we have just announced. The subject of which they treat, is one which has not, until recently, received that attention from the medical profession, to which its importance entitles it. And

even at the present day, the majority of surgeons are by no means as well informed, as it is desirable that they should be, with regard to the pathology and treatment of distortions of the feet. This class of distortions has been noticed from the earliest period to which the records of medicine extend. Hippocrates alludes to them, and describes the mechanical contrivances which were resorted to in his day for their relief. And it would appear from his remarks, that as large an amount of success attended the employment of these means, as has resulted from the purely mechanical method at any subsequent period. From the time of Hippocrates until near the close of the eighteenth century, no advance seems to have been made in investigating the character of these distortions, nor in applying means for their mitigation or removal. The operation of dividing the tendo Achillis for the cure of club-foot, was first suggested by a German physician named Thilenius. The operation was performed at his suggestion by a surgeon named Lorenz, on the 26th March, 1784. The wound healed on the 12th May, and the patient was perfectly cured. Sartorius was the next who divided the tendo Achillis, which he effected after an extensive external incision, and a careful dissection down to the tendon. Finding the tendon adherent to the deeper tissues, he then dissected it from them, and afterwards with great violence flexed the ankle joint, reducing the foot to its natural position. The wound healed at the end of nine weeks, at which time the deformity was removed, but complete ankylosis of the ankle had taken place. Michæelis operated by cutting through only one-third of the fibres of the tendon, and then stretching or lacerating the remaining fibres, which he did immediately after the incision, attempting at once by violent traction to restore the foot to its normal position. He performed this operation several times, and represents it as having generally been successful. His first operation was in 1809. Delpech suggested important improvements both in the mode of performing the operation and in conducting the subsequent treatment. He operated in May, 1816. Instead of cutting directly down to the tendon as his predecessor had done, he introduced an instrument between the tendon and the deeper parts, and cut backward toward the surface, leaving the skin covering the tendon undivided. The peculiarity of his subsequent treatment consisted in retaining the ends of the divided tendon as nearly as possible in contact, until they had become united by lymph, and then gradually extending the connecting medium. His errors consisted, according to Dr. Little, in making his external incisions too large, and in bending the ankle immediately after the operation, for the purpose of ascertaining if there were any remaining obstacles to the removal of the

distortions. He immediately brought back the foot to its distorted position, in which he retained it for four weeks, when gradual extension was commenced. The operation was followed by fever, with suppuration and sloughing of the tendon and cellular tissue. The treatment was very tedious, but was ultimately successful.

The profession is chiefly indebted to Stromeyer of Hanover, for having fully demonstrated the safety and utility of dividing the Tendo Achillis, and other tendons, for the cure of distortions of the feet, and for having perfected the mode of treatment suggested by Delpech. His first operation was in February 1831, and in 1833 and 1834 he published the details of six successful cases. Since the operation, as performed by Stromeyer, was made known to the public, it has frequently been repeated, with some modifications, by Dieffenbach of Berlin, Pauli of Landau, Bouvier of France, Little and Whipple of England, and many other European surgeons. In this country it was first performed in North Carolina, in 1835, by Dr. James H. Dickson, who now resides in New-York. It has since been performed by Dr. N. R. Smith of Baltimore, Dr. Detmold of New-York, Drs. Norris, Mütter, Mc Clelland, and Fox of Philadelphia, and Dr. Walter of Pittsburg. Almost every operator has introduced some modification, either in the manner of operating, or in conducting the subsequent treatment. But the general principles, which were first suggested by Delpech, and afterwards more fully carried out by Stromeyer, have been confirmed by the experience of other surgeons. In the words of Dr. Little :

“The real improvements which have been effected since the announcement of Stromeyer’s success, consist in the more complete definition of the anatomy, pathology, and varieties of talipes; in the demonstration of the certainty of cure in a larger proportion of the severer forms of distortion; and also in some improvements to the apparatus; but, to the merit of these improvements, Stromeyer may assert a direct claim to a considerable share. The candour and ability with which he published the entire nature of his mode of proceeding, faithfully depicting both his successes and attendant difficulties; the persevering assiduity with which, notwithstanding the opposition of his contemporaries, he continued, for two or three years, to multiply instances of the value of the division of tendons, before his example found imitators, as justly entitle him to the gratitude of the profession, as they will ensure him honour from posterity.”

Dr. Little uses the term talipes as a generic term, including all the varieties of distortions of the feet, which, in common language, are known as club-feet, and which are distinguished by the circumstance that the whole or a large part of the soles of the feet are not applied to the ground. He describes four species of this deformity, under the

names of *talipes equinus*, *t. varus*, *t. valgus*, and *t. calcaneus*. In the first, the heel is drawn up, and the weight of the body is thrown upon the toes, commonly upon their plantar surface, but in extremely aggravated cases, the sole is turned so completely backward that the weight of the body rests on the dorsal surface of the toes. * Dr. Mütter gives the details of a case of this kind which he treated, and which he designated as *talipes dorsalis*, under which name it was described by Mr. Whipple. In the second species, or *talipes varus*, the heel is drawn upward, and the toes turned inward; and the weight of the body is thrown upon the outer side of the foot, the sole looking more or less backward. In the third species or *talipes valgus*, the sole of the foot looks outward and backwards, the weight of the body resting on its inner edge. In this species the heel is sometimes elevated; but in most instances it touches the ground by its inner edge, while the toes are more or less elevated. In the fourth species or *talipes calcaneus*, the back part of the heel rests on the ground and supports the whole weight of the body, the foot being flexed to an acute angle with the leg, and the toes not touching the ground. The first and second species are much more common than the others. The last is extremely rare, and as far as we recollect, is not noticed by any other writer than Dr. Little.

These distortions frequently exist at the time of birth, in which case they are distinguished as congenital, or, more properly speaking, as connate, *talipes congenitus*, or *connatus*; in other cases, they are the result of disease occurring after birth, and are known as acquired club-foot, or *talipes acquisitus*. In general, the deformity is greater in those cases in which it existed at the time of birth, than in those in which it commenced at a subsequent period. And in cases occurring after birth, other things being equal, the degree of deformity is in proportion to the earliness of the attack. This circumstance is explained by the more yielding nature of the tissues composing the foot in early life. Dr. Mütter asserts that the acquired club-foot rarely, if ever, presents the elevation of the heel to any considerable extent. A number of the cases detailed by Dr. Little show the incorrectness of Dr. M.'s statement. The pathology of club-foot is not well established, and the mode of its production is still a subject of controversy. According to Dr. Little:

The various opinions of the best authorities may be arranged in three classes, and stated as follows, viz.:

1. That the primitive formation of the bones is unnatural and incomplete.
2. That the bones, being originally perfectly formed, become injured and distorted by causes independent of the formative process; viz.: by pressure, oc-

casioned by the fœtus drawing the limbs into unnatural positions; by an improper situation of the fœtus in the uterus; or by certain ligaments becoming elongated, and the articulations distorted, from contraction of some of the muscles and relaxation of others.

3. That whatever may have been the condition of the bones on the occurrence of distortion, the act of walking displaces and injures them."

Von Walther regards talipes varus, which is the most common form of club-foot, as the result of arrested developement, intimating that it is the normal condition of the foot at an early period of fetal life. This explanation has not been corroborated by other observers, and it would involve in greater obscurity the etiology of *t. valgus*. Dr. Little presents the following causes of club-foot, and of many distortions of other parts of the body, as enumerated by Stromeyer:

1st. Structural changes in the muscles, inflammation and wounds, with loss of substance. (These causes, however, induce contracture, but not talipes equinus, varus, or valgus.)

2nd. Debility and inactivity of antagonists—produced,

a. By wounds of tendons, or of the bellies of antagonist muscles. (This does not produce true talipes.)

b. By paralysis of the nerves of the antagonist muscles: this may be complete or partial, and affect either the voluntary or involuntary (reflex) motor powers.

3d. Diminution of voluntary power in the entire limb, without paralysis of the sympathetic nerves, through which the flexors (in the foot, the extensors) preponderate over the extensors, (in the foot the flexors) by the constant organic contraction of the muscles.

4th. Painful affections of the part, restraining or prohibiting motion, such as that from inflammation of a joint. In this instance also the extensors succumb to the flexors. This cause possesses great affinity with the preceding one, (although it does not produce true talipes.)

5th. Increased energy in the muscle, morbid contraction or motion of the muscular fibres—tonic spasm. The muscle, through constant contraction, becomes inert with reference to its particular function, but continues in a state of tension from its fibrous structure."

Dr. Little agrees with Stromeyer in regarding the different forms of talipes, as originating, in the majority of cases, if not universally, in an abnormal contraction of certain associated muscles, acting on the bones, cartilages, and ligaments of the foot at a tender age, when, from their imperfect state of developement, and from the softness of their texture, they are capable of yielding readily in any direction in which a moderate degree of force is applied to them. He illustrates this opinion by a number of cases occurring after birth, in which paralysis or spasm, destroy-

ing the equilibrium of the muscles of the limb, appears to have had the principal agency in the production of the deformity.* The origin of the causes in which the distortion was connate, cannot be so clearly traced; but from the similarity of the deformity, and of the associated phenomena, it appears reasonable to infer that they proceeded from causes similar to those which produced the disease at a period subsequent to birth. Dr. Mütter treats with entire contempt all the theories which have been adopted to explain the origin of talipes in utero, and regards the whole subject as involved in such inscrutable mystery, as to render all speculations with regard to it unworthy of attention.

Although Dr. Little regards talipes as originating in abnormal muscular contraction, he does not overlook the existence of other agencies, which materially aggravate the deformity after it has been produced. The principal of these agencies is standing or walking, by which the weight of the body is thrown upon the distorted limb. In those persons who are affected with talipes, and who have been in the habit of taking much exercise, the following condition of the foot is usually found. The bones of the tarsus are more or less displaced, although it rarely if ever occurs that any one of them is totally dislocated: some of the tarsal ligaments are preternaturally shortened and rigid: the cuticle becomes very thick and hard on those portions of the foot which are subjected to pressure, and frequently painful corns or bursal swellings exist in those situations. The individual bones are seldom materially altered in their forms, and true ankylosis or bony union rarely takes place between them. Talipes is often attended with very imperfect developement of the bones of the leg, which are shorter and more slender than in their normal condition. The muscles also are generally wasted, and the muscular power of the whole limb is often very deficient. Dr. Mütter says, that in connate talipes the muscles have at the time of birth their normal developement; but at a later period, when the subject of the deformity begins to walk, the muscles diminish in their relative size. Dr. Little accounts for the production of the different species of talipes in the following manner: 1st. Talipes equinus is occasioned chiefly by the contraction of the gastrocnemius and soleus muscles drawing up the os calcis.† 2nd. Talipes varus is produced by the contraction of the same muscles, together with that of the tibialis anticus and posticus, by which the inner margin of the foot is drawn upward, and its anterior extremity

* Dr. Mütter regards the want of equilibrium in the muscles of the leg as the effect, and not the cause, of the distortion of the foot.

† Dr. Mütter remarks that *t. equinus* is rarely a congenital defect. This does not seem to accord with the observations of Dr. Little.

is turned inward. In aggravated cases, the tarsus yields in the middle, the os calcis with the astragalus being drawn upward and backward by the gastrocnemius and soleus, while the anterior portion of the tarsus together with the metatarsus and phalanges are drawn upward and inward by the anterior and posterior tibial muscles, so that the outer ankle and dorsum of the foot become the chief points of support when the foot rests on the ground. Although the deformity is greater in a case of this kind, the inconvenience in walking is not so great as when the weight of the body is thrown upon the toes. 3d. Talipes valgus results principally from the contraction of the peronei muscles, elevating the external margin of the foot, and turning its anterior extremity outward. In some cases, this is combined with a contraction of the gastrocnemius and soleus, by which the heel is at the same time elevated. 4th. Talipes calcaneus, in the only case observed by Dr. Little, was produced by contraction of the tibialis anticus, and of the extensor longus digitorum pedis.

Besides the muscles which have been mentioned as having the principal agency in giving rise to the different forms of talipes, the deformity may be increased or its removal embarrassed by the contractions of other muscles, as those which are situated on the foot, and by the shortening and rigidity of the fascia plantaris, and of some of the ligaments of the foot. Dr. Mütter observes that club-foot occurs more frequently on the right side than on the left. This remark appears to be contrary to the opinion of Dr. Little, although it is corroborated by the cases which he describes.

The treatment which has been adopted by Dr. Little for the cure of club-foot is essentially the same as that which is pursued with so much success by Stromeyer. It consists in the division of the tendons of those muscles which offer the greatest resistance to the removal of the deformity, and in the subsequent application of a mechanical apparatus adapted to each particular case. The principal obstacle to the reduction of the foot, in cases of *t. equinus* and *t. varus*, which together constitute the vast majority of all the cases of club-foot, is found to be the tendo Achillis, as it is drawn up by the gastrocnemius and soleus muscles. In numerous cases, the deformity is easily and entirely removed by the division of this tendon, followed by the judicious application of a mechanical apparatus. But in other instances it is also necessary to divide the tendons of the tibialis anticus, and posticus, and those of the flexors of the toes: advantage is sometimes derived from the division of the plantar fascia. Dr. Little thus enumerates the principles which are recommended by Stromeyer, and which are the basis of his own method of treatment.

"The tendons of the muscles which maintain the deformity should be divided with as little injury as possible to the skin and neighbouring parts.

No attempt should be made to force the foot into its natural shape immediately after the operation; but the necessary extension for that purpose should be commenced as soon as the external puncture or punctures are completely healed; this occurs about the second or third day.

The lymph which is effused between the ends of the divided tendon or tendons, with the muscles which are not divided, and the ligaments or fascia which may impede the replacement of the foot, must be gradually extended until the foot assumes its natural shape, and the ankle can be bent to its fullest extent.

The application of the apparatus by which extension is effected, must be continued for a certain period after the cure, notwithstanding that the patient has been enabled to stand firmly, and has improved in walking, in order to obviate the tendency to contraction evinced by the intermediate substance or lymph effused between the ends of the divided tendons."

Dr. Little thus describes his mode of operating, and the subsequent treatment which he pursues :

"The operation for dividing the tendo Achillis is performed as follows : the patient being seated, an assistant supports the knee, whilst another, drawing downwards the patient's heel with his left hand, and pressing upwards the toes and front of the foot with his right, produces the necessary tension in the tendon proposed to be divided. The operator, after feeling the outline of the tendon with the left forefinger and thumb, passes the bistoury through the skin, one or two finger's breadth above the malleolus internus, with one of its sides turned towards the tendon, and the other directed towards the deeper muscles and the tibial vessels and nerves. On being satisfied that the point of the knife has been passed beyond the external edge of the tendon, and has nearly reached the skin of the opposite side, the knife is turned so as to bring the cutting-edge to press against the anterior surface of the tendon, which is then divided by the action of withdrawing the knife from the limb, and commonly by a single stroke. The complete division of the tendon is known by the immediate cessation of the tense resistance, by hearing a distinct snap, and a feeling before the knife is wholly withdrawn that nothing remains undivided except the flaccid integuments. The operation does not occupy a quarter of a minute, and is almost bloodless, as usually not more than a single drop of blood is effused."

"In order to ascertain whether a scalpel, either straight or convex-edged, was better adapted to the performance of this operation than a concave-edged knife, I have on various occasions, employed different knives, passing from that formerly described as the straight French bistoury, and even to a small common scalpel. I find, upon the whole, that a knife with a strait or slightly convex-edge is preferable to one too much curved, or too concave; provided, however, the operator possess ordinary dexterity, the form of the knife which he uses will be of little consequence."

“The division of the tendon of the posterior tibial muscles is, in my opinion, best accomplished at the distance of two or three fingers breadth above and behind the internal malleolus. The point of a strong and straight bistoury should be introduced through the skin at the outer edge of the tendon, and passed between it and the tendon of the long flexor of the great toe, directed towards the tibia. As soon as the knife reaches the bone, the handle should be depressed outwardly, and the point carried internally beneath the posterior tibial tendon, and continued outwards until the surgeon is satisfied that the point has passed beyond the inner edge of the tendon. He may then feel that he has the tendon upon the edge of his knife, when by a few slight cutting motions he may divide it without difficulty. No snapping sound, similar to that which follows the division of the tendo Achillis, is heard when the section of the posterior tibial tendon is accomplished; as the fleshy fibres of this muscle take their origin so low towards the malleolus internus, that they prevent the occurrence of any considerable retraction of the superior end of the tendon.

“The most favourable situations for dividing the tendons of the tibialis anticus, and flexor longus pollicis muscles are where the former passes in front of the ankle joint, and where the latter is felt most prominent in the sole of the foot, in those cases where division is required. The manner of dividing each of these tendons is to pass the point of a bistoury through the integuments, and then with great care beneath the tendon, avoiding to carry the knife farther than is absolutely necessary, and dividing the tendon from within outwards, in order not to endanger any of the neighbouring structures. The recoil of these muscles, on their tendons being divided, is distinctly felt and heard. If they be thus cautiously divided, no risk is incurred of injuring the anterior tibial, posterior tibial, and internal plantar arteries, or any of the nerves. The wounds made in the integuments are extremely small, and unite by adhesion; consequently all chance of suppuration and sloughing is avoided.”

“After either of these operations, the application of a few strips of adhesive plaster, and a common bandage is the only dressing required. The limb should be laid in its deformed position on its outer side, and supported by a common wooden or paste-board splint. The latter after being softened by soaking in water, may be advantageously applied to the limb a day or two before the operation, &c.

The apparatus to which I resort for the necessary extension of the limb, is the foot-board invented by Stromeyer, and another apparatus constructed in some respects upon the principle described and represented by Scarpa, in his work upon the cure of these deformities.”

Stromeyer's apparatus, to which Dr. Little here alludes, consists of a broad wooden splint which is applied to the posterior part of the leg, and a foot-piece so connected with it as to possess a double motion, first, in the direction of flexion and extension of the foot upon the leg, and secondly, a sliding motion by which it can be accommodated to the more or less oblique position of the foot. The other apparatus which

is employed by Dr. Little, and which is a modification of that which is described by Scarpa, consists of the following parts: 1st. An iron shoe padded with hair, and covered with leather. 2d. A steel spring which is applied to the outside of the leg in t. equinus and varus, and to the inside in t. valgus, fastened to the shoe below, and kept in contact with the leg by means of a padded strap which encircles the limb below the knee. 3d. A vertical strap attached to the heel of the shoe below, and above to a circular padded strap which goes around the leg just above the ankle. 4th. Two straps which are fastened to the inner side of the heel of the shoe, and which buckle around the instep. 5th. A short spring which is fastened to the outer side of the shoe near the heel, while its free extremity looks forward, and is connected with the anterior part of the foot by a strap which passes around the toes. The use of this spring is to overcome the inversion of the toes. 6th. A screw, by which the angle of junction of the leg-spring and the shoe may be altered at pleasure. It is by means of this screw that the bending of the ankle is accomplished.

The restoration of the foot to its normal position, after the division of such tendons as it may be necessary to cut, is in some cases accomplished with very little pain or inconvenience to the patient. In other cases, it occasions a considerable amount of suffering, owing in part to the rigidity of the tissues which require to be stretched, and in part to the greater sensibility of the individual. In all cases, the restoration of the limb should be effected gradually and without violence. Care should also be taken, by the proper application of bandages, pads, and cushions, to equalize the pressure, or to guard against excoriations. The use of India-rubber air-cushions has been found to be of great advantage in the practice of Dr. Little in protecting corns and other tender parts of the feet from injurious pressure. It sometimes happens, in spite of all the precautions which may be observed, that excoriations, erysipelas, &c. will be produced, and will make it necessary for a time to suspend the treatment. After the treatment has been interrupted in this manner, it sometimes becomes necessary again to divide some of the tendons. When the pain produced by the stretching of the ligaments, &c. is so severe as to prevent the patient from sleeping, the apparatus may be somewhat slackened during the night. But it will not be proper to yield too much to the feelings of the patient: the surgeon should ever bear in mind that his object is not so much to promote present comfort as to effect a radical cure of the deformity. The pain may be moderated, and sleep obtained by the appropriate use of anodynes. Advantage is sometimes derived from the removal of the apparatus at night, and the substi-

tution of a tin splint adapted to the existing form of the limb, so as to prevent any increase of deformity in consequence of muscular contraction during the night. The length of time required for the cure of talipes, varies greatly in different cases. It does not depend simply on the age of the patient, nor on the extent of the external deformity; but it is much influenced by the rigidity of the ligaments, the altered form of the bones, occasioned by long exercise on the deformed limb, and by other circumstances. Dr. Little makes the following observations with regard to the time occupied by the treatment :

“In the average cases of club-foot, whether congenital or otherwise, two or three weeks elapse, after the operation, before sufficient bending of the joint is obtained: previously to which, however, the patient is allowed to walk wearing the apparatus: after the expiration of another fortnight, the greater part of the tenderness of the ankle joint, produced by the stretching of the ligaments, subsides. By this time the union of the tendon has acquired sufficient firmness to allow of walking and exercise in the open air. In the greater number of cases, particularly in children, the ankle-joint requires to be supported by a modification of the instrument used to effect the extension, or by one or two thin steel springs, or pieces of whalebone sewn between the outer leather and the lining of the side of a lace-up-boot. Some time elapses before the gait of the individual acquires the ultimate perfection of which it is susceptible. Children advance more slowly in this respect than adults, as they limp if they feel the least uneasiness, and cannot take as much pains with their manner of walking. I have had many adult patients, who, within two months after the performance of the operation, have walked several miles, and have had but little appearance of lameness. I have, however, treated one very bad case of congenital *t. varus*, which was under my care for nine months — that of a gentleman who had walked from infancy without the slightest mechanical support, and whose foot had consequently reached a most frightful degree of deformity: but the ultimate success, notwithstanding the attendant difficulties, enables me to refer to this case as a triumphant proof of the advantage of the Stromeieran method of cure.”

In *t. equinus*, and in some forms of *t. varus*, as soon as the deformity is so far removed that the sole of the foot can be placed upon the ground, the further progress of the cure is promoted by walking freely on the limb.

Dr. Mütter's mode of operating, and his subsequent plan of treatment, differ somewhat from those of Dr. Little. He divides the tendo-Achillis from behind forwards, introducing the knife between the integuments and the tendon, while the foot is forcibly extended so as to relax the gastrocnemii, and then turning the edge of the knife backwards and dividing the tendon, while an assistant renders it tense by attempting to bring down

the heel. Immediately after dividing the tendon, he depresses the heel as much as possible, and at once applies the apparatus for the removal of the deformity. In dividing the tendo Achillis from behind forward, and in commencing at once the attempt to restore the foot to its natural form, Dr. M. follows the plan which was prescribed by Bouvier and Whipple. He gives two reasons for rejecting Stromeyer's method of dividing the tendo Achillis. 1st, That it endangers the wounding of the posterior tibial artery. 2d, That it does not ensure the division of all the fibres of the tendon. With regard to the first of these reasons, we cannot perceive that it has any force, as it would require a very unusual degree of ignorance and awkwardness to divide the artery by either mode of operating. We are inclined to think that there is some force in the second of Dr. M.'s reasons; and from the trials which we have made of both methods of operating, on the dead subject, we are induced, upon the whole, to prefer the mode which is recommended by Dr. Mütter. For conducting the subsequent part of the treatment, Dr. M. employs a variety of instruments, to some of which he lays claim as being entirely of his own invention, and others he admits to be modifications of instruments used by other surgeons. They appear, in general, to be more clumsy than those recommended by Dr. Little, but they have the advantage of being less expensive. It is not necessary to give a description of these instruments, as the work itself, which is accessible to all our readers, contains a full account of them, illustrated by cuts, which give a better idea of their construction than any mere description can furnish.

Dr. Little recommends, in the treatment of talipes in infants under 12 or 14 months of age, that mechanical means only be employed. His first attempt, in treating t. varus in infants, is to overcome the twisting of the foot, and to reduce it to the state of talipes equinus. This he accomplishes before the age of six months, by the use of tin splints adapted to the foot and leg, the foot-piece being soldered to the leg-piece, at an angle corresponding with the degree of extension of the ankle in its deformed condition. The inner side of the foot-piece comes up as high as the top of the foot, while its outer side comes just above the sole. The leg and foot are confined in this splint by means of a roller, and, in this manner, the eversion of the toes and twisting of the foot are overcome. When the foot is reduced to the condition of t. equinus, splints may be employed of a similar construction, except that the angle by which the two portions of the splint are connected with each other, approaches more nearly to a right angle. By employing a series of these splints, in each of which, successively, the angle becomes less obtuse, the de-

formity may, sometimes, be entirely removed. After the age of six months, Dr. Little uses Scarpa's apparatus as modified by himself, and as before described. After the child has become sufficiently old to walk, if the deformity continues, Dr. L. recommends the division of the tendo Achillis. It is of the highest importance in the treatment of club-foot in infants, to avoid disturbing their rest, or injuring their general health.

The work of Dr. Little is evidently the fruit of much observation and reflection. Its author was himself a subject of the disease of which he writes, and was indebted to Stromeyer for the successful treatment of it in his own person. He has devoted a number of years to the investigation of the different forms of distortion of the feet, and has himself treated 82 cases. In this treatise he presents the details of 34 cases, illustrating the pathology and treatment of the different varieties of the disease. Of these cases, 17 were of *t. equinus*, 15 of *t. varus*, one of *t. valgus*, and one of *t. calcaneus*. In the treatment of 19 of these cases, the tendo Achillis alone was divided; in 3 the tendo Achillis and the tendons of the tibialis anticus and posticus; in 2, the tendo Achillis and the tendon of the tibialis posticus; in one, the tendo Achillis and the tendons of the flexor longus pollicis and extensor proprius pollicis; in one the tendo Achillis and the tendons of the flexor longus pollicis; in one the tendo Achillis and the tendons of the peronei. Seven cases were treated without the division of any tendons. The deformity was so far relieved that the sole could be placed on the ground.

In	1	case in	5	days.
"	1	"	7	"
"	1	"	10	"
"	6	cases in	2	weeks.
"	5	"	3	"
"	8	"	4	"
"	3	"	6	"
"	1 by mechanical treatment alone, in 8 months.			

In 2 cases the treatment was interrupted. In the remaining six cases, which were treated without any operation, the duration of the treatment is not mentioned. The ages of the several patients were as follows :

Under 1 year	.	.	1	10 to 20 years,	.	.	12
1 to 2 years,	.	.	2	20 to 30 "	.	.	6
2 to 5 "	.	.	5	30 to 40 "	.	.	3
5 to 10 "	.	.	3	50 "	.	.	1

There was also one patient, a medical man, whose age is not stated.

Dr. Little's treatise is illustrated by a number of wood-cuts, which are well executed, from drawings made by the author himself, or under his immediate supervision.

Dr. Mutter's lecture contains, within a small compass, a considerable amount of valuable information. The subject of which it treats is also elucidated by a series of wood-cut engravings. But the author's style of writing is loose and inaccurate, and he has, moreover, been peculiarly unfortunate in his selection of a printer, as the list of errata occurring in the course of 77 pages, is more extended than it ought to be in a large volume. We would recommend special attention to this subject, and a thorough revision, if a second edition should be called for. We have no space for any extracts from the lecture, but will merely present the author's summary of 28 cases of club-foot, which he has treated, and the details of which are recorded in an appendix.

"Of 28 cases, 21 were congenital; 7 were acquired; 19 of varus; 2 of valgus; 7 of pes equinus; 19 occurred in males; 9 in females; in 16 both feet were affected; in 12 only one foot, in 8 of which the right was deformed, in 4 the left.

2 in children under one year; 9 in children from one to 6 years; 16 from 6 to 30 years; 1 from 30 to 50 years.

20 perfectly cured; 8 under treatment; 1 cured in from 10 days to 4 weeks; 9 in from 4 weeks to 2 months; 10 in from 2 to 4 months.

A. C. P.

Traité des Difformités du Système Osseux, &c. &c. Par F. HUMBERT, Directeur de l'Etablissement Orthopédique de Morley, &c. &c., et par N. JACQUIER, Docteur Médecin, &c. &c. 8vo. 4 t. pp. 1500. Accompagné d'un Atlas de 174 planches, in 4to. (A Treatise on the Deformities of the Osseous System, with an Atlas of 174 plates.)

THIS is a work of most formidable dimensions, designed to prove the curability of almost every kind of deformity by mechanical means, when they are judiciously applied, and at an early period of life. M. Humbert, the principal author, is at the head of a large orthopedic establishment at Morley, and asserts that, during the last eighteen years, he has effected a more or less complete cure of more than three hundred cases of deformity. Distortions of the spinal column are those which have been most frequently committed to his care, and to them the principal part of his work is devoted. His chief reliance for the removal of these distortions, is on the persevering use of mechanical means, adapted to

straighten the portion of the body which is preternaturally curved, and to sustain the pressure of the superincumbent parts. For this purpose he employs crutches, arm-chairs, and couches with numerous fixtures, modified in a great variety of ways, to adapt them to the different kinds and degrees of deformity. He also employs corsets stiffened with plates of steel and thick leather, to which he attached great importance. As auxiliary remedies, he makes use of baths, which are chiefly local, *douches*, frictions, and other manipulations. He approves of gentle exercise, but pointedly condemns the violent course of gymnastics, which some authors have so highly recommended as a means of strengthening the muscular system, and thus preventing an increase of the deformity. His reasoning on this subject appears to us to be just. He says that, when the equilibrium between the muscles on the two sides of the body is lost, violent exercise only increases the action of the muscles which already are proportionably too strong, the consequence of which is, that the deformity becomes aggravated.

The patients treated by M. Humbert were generally between the ages of twelve and twenty years. The duration of the treatment was usually from one to two or three years. The result is represented to have been, in a few cases, an entire removal of the deformity, and in nearly all, a very marked improvement. In numerous instances, the patients were prematurely removed from the institution by their friends, because they regarded them as cured.

As the management of these orthopedic institutions is not familiar to the profession in this country, we have thought that it would be acceptable to our readers to be furnished with an extract, exhibiting the daily routine of the establishment at Morley :

“At two o'clock in the morning, the maid who has charge of the baths begins to prepare them for the use of the patients.* When the temperature of the water and the air in the apartments has been elevated to the proper degree, the patients are freed from the apparatus in which they sleep, and are conducted to the baths. The baths are then administered to each patient during a period of 15 minutes, after which the patients are again conducted to their beds, and the apparatus reapplied. A bell rings at 8 o'clock, when the patients are freed from their sleeping accoutrements, are dressed for the day, and have their walking apparatus adjusted. At 9 o'clock breakfast is served, after which they walk about, visit each other, &c. until eleven, when they are again subjected to the process of local bathing as in the night. After bathing, they are placed

* M. Humbert gives as a reason for administering the baths during the night, that the apparatus becomes irksome, if applied without interruption during the whole night, and that the patients enjoyed more refreshing sleep after the use of the baths.

in arm-chairs, so constructed as to relieve the spine from the pressure of the upper parts of the body. They have desks placed before them, on which are laid different articles to employ or amuse them, such as needle-work, embroidery, paper for drawing, writing, &c. They remain in this position until 5 o'clock, refreshments being brought to them at half-past one. Waiting-maids are in constant attendance to furnish them with whatever they require. At 5 o'clock the apparatus is removed from them, and at 6 they dine; after which they promenade or amuse themselves in other ways. At 8 o'clock they retire to their rooms; and at half-past 8 they are placed in their beds, and the apparatus in which they sleep is adjusted to them. After this, the director of the establishment, accompanied by an attendant who has the immediate charge of the machines, goes through all the rooms, examines whether the apparatus is well applied, and inquires into the condition of the patients. Once a week, the director examines the deformity of each of the patients, and directs such modifications of the treatment as he may deem necessary."

M. Humbert treats deformities of the extremities on the same principles as those of the spine, and condemns the division of tendons as unnecessary and injurious. But the long duration of the treatment in the cases of club-foot which he records, as contrasted with those which have been treated by the division of tendons, is a strong argument in favour of the last-mentioned practice. M. Humbert treats old dislocations by mechanical means acting gradually, and tending to overcome the contraction of muscles, by which the bones are retained in their abnormal position. By this mode of treatment, he professes to have succeeded in reducing a dislocation of the hip-joint of six years standing.

The style of this work is obscure, its arrangement deficient in method, and its plates and explanations very difficult of comprehension. And upon the whole, we think that there are but few members of the profession who will devote as much time and attention to its perusal, as will be necessary in order to understand it fully, and to derive from it much valuable information.

A. C. P.

On Granular Degeneration of the Kidneys, and its connection with Dropsy, Inflammations, and other Diseases. By ROBERT CHRISTISON, M.D., F.R.S.E.: President of the Royal College of Physicians of Edinburgh, Professor of Materia Medica, and one of the Professors of Clinical Medicine in the University of Edinburgh, &c. Edinburgh, 1839, Svo. pp. 288. (Republished in Dunglison's Medical Library, Vol. III.)

THE above work of Dr. Christison is a most valuable contribution to

medical science, and an admirable model for those who would successfully investigate disease. Two-fifths of the work consist of illustrative cases, but they only form a part of the observations upon which his deductions, constituting the main body of the work, have been based. The language of Dr. Christison will be employed, as far as practicable, in giving a summary of his work. Much valuable matter must, necessarily, be omitted, and therefore all are earnestly recommended to procure the work itself.

In the year 1827, Dr. Bright announced, in his "Reports of Medical Cases," that dropsy frequently depends on a peculiar degeneration of the structure of the kidneys; and that this change of structure is likewise attended with a liability to other diseases, more especially of an inflammatory nature, and is indicated by the presence of albumen in the urinary secretion. Blackall, Alison, Andral, and especially Wells, had previously made observations which, if followed out, might have led them on to the general principles established by Bright.

Since 1827 the material parts of Dr. Bright's statements have been fully confirmed, and additional information published on the subject, in separate treatises, and in medical journals, in Edinburgh, Dublin, London, and Paris. In the work under review, Dr. Christison has not only brought forward new facts, especially in relation to the composition of the blood, but also availed himself of the researches of others.

Pathology and morbid appearances. The disease is a morbid degeneration of the kidneys, whose exact nature has not yet been ascertained. In its progress it is essentially chronic. The morbid deposit appears to be always thrown out gradually and slowly. Yet it is occasionally preceded, and often throughout its course becomes, for a time, accompanied, both by local and general reaction. It is attended by irritation of the kidneys, of that kind which is characterized by the excretion of blood, or of its albuminous portion. It tends to diminish or suppress the excretion of the solids of the urine, both in the early stage, by causing functional disturbance, and, likewise, in the advanced stage, by inducing extensive derangement of organic structure. It also tends singularly to impoverish the blood, by depriving it of a large proportion of its colouring matter. Ultimately, its intrinsic result is to overwhelm the functions of the brain, by fatal coma, probably in consequence of the blood, the proper stimulant of that organ, being, on the one hand, poisoned by the accumulation of urea, and deprived, on the other hand, of its colouring matter. But it also engenders in the constitution a certain infirmity, or susceptibility; which, while indicated, in some measure, by a proneness to disease at large, is more peculiarly characterized by a liability to

serous effusions, as well as to inflammation of the serous membranes and of the internal viscera. And it is through the intervention of these secondary circumstances, that the disease of the kidneys most generally proves fatal, — much more so than by its intrinsic consequences, the direct annihilation of the cerebral functions.

“ When the disease, in its *incipient stage*, has assumed an acute form, which is rarely the case, and has proved fatal, the kidneys are found flabby, friable, and unusually large, each weighing eight or nine ounces, and, sometimes, even twelve ounces, as once seen by Rayer, instead of four or five ounces, the natural weight of the kidney; much darker and more vascular externally, and with points and star-like spots of ecchymosis; internally dark, brownish-red, or almost reddish black, gorged more or less with blood, which drops from a cut surface in unusual quantity; and they often present, throughout their whole structure, but more especially in their cortical portion, lines, small roundish specks, or stellated spots of still darker colour, like ecchymosis, and not easily removed by washing. Rayer thinks he has ascertained that these spots are the Malpighian glands in a state of congestion. Generally the cortical substance is chiefly affected, and seems considerably broader than in the healthy state, as if it were distended towards the circumference by its gorged condition, — a state which the French pathological writers consider to be hypertrophy of the organ. Occasionally, there is also an appearance in the cortical substance of a granular matter, of a dark-reddish-yellow tint, deposited here and there; so that its natural striated texture is somewhat obscured. The lining membrane of the pelvis of the kidney is commonly very vascular and red. The bladder is always found much contracted; and it commonly contains only a drachm or two of urine, which is, for the most part, pale, always very strongly coagulable by heat, and varying in density from 1014 to 1025. When the urine has been suppressed or much reduced before death, and life has been terminated by fatal coma, it is an invariable fact to find the blood and other fluids more or less largely impregnated with urea. In such cases, death seems to be produced by a suspension of the functions of the brain, as already stated, in consequence of the presence of urea in the blood, as generally no visible pathological change is found in the brain itself, not even congestion of blood or serous effusion, except in some rare cases.

It is not improbable, that some of the instances where a dark, flabby, enlarged, congested state of the kidneys has been found, in connection with coagulability and gradual suppression of urine, have been nothing more than cases of ordinary, or pure nephritis; which, if not cut short by fatal coma, might have continued to run the course of an acute disease,

and terminated in resolution, or in suppuration, rather than in granular deposition.

The deposition of granular or cheese-like matter in the cortical structure of the kidney, and the disappearance, partially or completely, of the natural structure, constitute the *middle stage* of the disease. This is the stage of the disease, in which it most commonly first manifests itself by symptoms, and leads to serious disturbance of the health. The kidney may be either larger and softer, or smaller and firmer than natural. Its colour, externally, is paler, sometimes uniformly grayish, grayish-yellow, or yellowish-red, more commonly of its usual brown tint, but of a paler shade, minutely mottled with gray, or yellowish-gray, and often traversed by white indurated streaks like cicatrices. When its investing membrane is removed, which, for the most part, may be done with facility, the outside of the kidney is seen to be more distinctly mottled brown and gray, or else uniformly grayish or yellowish, with numerous spots of vascularity, often forming lines or stellated chequerings. The surface has, consequently, a granular appearance, and is often actually rough from a distinct granular structure. When a section is made through the kidney, the cortical structure is seen broader than natural, sometimes of the natural breadth, and sometimes much narrower. Its cut surface is grayish, grayish-red, grayish-yellow, or reddish-yellow, without the natural striated arrangement, or nearly parallel lines, but of a uniform, sometimes obscurely, sometimes distinctly, granular texture, chequered occasionally with reddish or brownish spots. When the kidney is injected, the matter, according to Dr. Bright, does not penetrate into the cortical portion. The granular structure of the morbid formation is sometimes quite distinct; more generally it is obscure to the naked eye on a cut surface, but becomes visible with a common magnifier, or on tearing the morbid tissue; but occasionally neither by tearing nor with a magnifier of four or five powers is the granular character to be distinctly seen, or any other than a smooth homogeneous structure like that of the brain; and, in a few instances, the structure is not only homogeneous, but friable, and not unlike the fatty degeneration of the liver, although there is no fatty matter in it. If death is occasioned in the middle stage by coma, consequent upon diminished urinary secretion, the bladder is found contracted and nearly empty; and the urine found in it has a density, for the most part, between 1010 and 1016, and coagulates more or less with heat and nitric acid, while urea is uniformly found in the blood, as well as in the serous fluids, effused in various quarters.

In the last or *advanced stage* of the disease, the whole structure of the

kidney, the tubular as well as the cortical, is invaded by the morbid deposit, while the natural structure is more or less completely absorbed. The natural structure of the kidney not only undergoes absorption, but, in some cases, the morbid deposit itself is absorbed. Hence we sometimes find one of the kidneys exceedingly small, flabby, thin, and so entirely deprived of its proper structure, that no vestige of either cortical or tubular substance remains. In such cases the ureter is, of course, useless; and in one instance of the kind, M. Solon found its canal obliterated.

There is very great diversity in the anatomical characters of the disease, as the kidney is not only sometimes excessively shrivelled, as stated above, but sometimes much enlarged, especially in the incipient stage; at one time little firmer than recent brain, at another harder than the hardest tubercular liver, cutting like cartilage; in some cases composed of a smooth homogeneous mass, in others finely granulated like herring-roe, and in others coarsely tuberculated, so as to present somewhat the appearance of being thickly studded with peas. The several characters here enumerated may occur in different cases, where the amount of the suppression of the solids of the urine during life, and the extent of disorganization of the healthy structure of the kidneys, which are the best measures of the stage or progress of the disorder, seem entirely the same. The morbid encroachment upon the healthy structure of the kidneys may thus be of an entirely different nature in different cases, and yet produce the same interference with their natural function.

At times every other organ, except the kidneys, is found in the healthy state; in such cases, as well as in many others, the immediate cause of death is coma, or the annihilation of the functions of the brain. Often where no sign of any secondary disorder had attracted attention during life, and the patient has died with oppression of the cerebral functions, the pathological inspection betrays a variety of morbid alterations, which show that important organic changes had been silently going on in other organs besides the kidneys. Very generally disease of other structures is manifested during life, and various secondary appearances variously combined in different cases are found after death, particularly dropsical effusions, namely, œdema of the cellular tissue at large, œdema of the lungs, serous effusions into the sacs of the peritonæum, pleura, and pericardium,—emphysema of the lungs, with redness of the bronchial membrane and mucous gorging of the bronchial tubes, as the consequences of catarrh,—the signs of recent inflammation of the lungs, redness, serous or sanguinolent infiltration, or hepatization of their tissues,—the signs of recent pleurisy, peritonitis, or pericarditis, such as turbid serum

effused into the cavities, and soft, curd-like lymph upon the membranes, — traces of inflammation of the alimentary canal, more especially of the intestines, redness of the mucous membrane, effusion of lymph on it, enlargement of its glands, or ulceration, — tubercular deposition in the liver, — softening of the spleen, — hypertrophy and dilatation of the heart, sometimes with valvular obstructions, sometimes without them. Among the rarer appearances may be mentioned œdema of the glottis, ulceration of the larynx, redness of the villous coat of the stomach, vascularity of the mucous membrane of the urinary bladder, induration of the spleen. In many cases too, traces are found of old attacks of visceral disease, more especially of pneumonia, pleurisy, peritonitis, and pericarditis. These secondary derangements sometimes occur in the incipient stage, especially those indicating recent inflammation. They are much more frequent, however, in the middle stage and still more so in the advanced stage of the disease of the kidneys.

In reference to *the blood in the advanced stage*, it is usually extremely deficient in all the organs; in one instance a tangible drop of blood could not be discovered in any part of the body, — not even so much as was necessary to determine whether the blood was fluid or coagulated. “Urea is present very generally in the blood and serous secretions, and always where death is preceded by material diminution of the secretion of urine.” The colouring matter of the blood is exceedingly defective, and hence the singularly blanched and bloodless appearance, particularly of the stomach and intestines, and of the brain and its membranes.

SYMPTOMS. — These may be arranged under the following heads: — local pain and other local uneasiness; disordered digestion; a diseased state of the urinary secretion; a deranged state of the general circulation, together with an altered condition of the blood; leucophlegmatia; and a variety of secondary or incidental affections of textures and organs at a distance from the primary seat of disease, among which the most frequent are œdematous effusion into the cellular tissue, serous effusion into the serous sacs, inflammation of the serous membranes, bronchitis, diarrhœa, rheumatism, and affections of the brain. These symptoms are very variously grouped in special cases; which diversity arises in part from the disease being sometimes acute, sometimes chronic, in its origin, and partly from the exceeding number and complexity of its secondary disorders.

When the disease is developed in an acute form, it is commonly after exposure to cold, or to cold and wet together. There is a preliminary fit of chillness or rigour, followed by feverish reaction, hard pulse, hot, dry skin, restlessness, thirst, loss of appetite, and headache. The urine

becomes quickly scanty, sometimes entirely suppressed, highly albuminous, occasionally bloody, and, in rare instances, mingled with clots of blood. There is also, for the most part, frequent desire to pass urine, with, at times, difficulty or positive pain in discharging it; not uncommonly dull, more rarely, acute pain in the loins, aggravated by pressure, and sometimes shooting downwards to the inside of the thighs or external parts of generation; and more usually, pain across the pit of the stomach, and in the flanks, either felt only on pressure, or increased by it, but constantly present more or less. Sickness and vomiting are of common occurrence. Secondary affections soon supervene, commonly after two days: of such secondary affections the most common are dropsy, especially of the face and limbs; coma, with or without convulsions; and acute serous inflammations, more especially pleurisy. The dropsy which occurs in this stage is of the kind which has been appropriately called inflammatory dropsy, from the fever and general tendency to inflammation which accompany it. Not unusually the disease is checked entirely under active treatment; often enough it proves fatal in four or five days by coma or by some acute serous inflammation; most generally, however, it passes into a more indolent form. The acute form of the disease is not generally developed in the marked manner above described; more frequently dropsy or some other secondary affection is developed soon after an attack of rigour with no other concomitant symptoms than scantiness and an albuminous impregnation of the urine. In many instances the disease appears to commence as an acute affection, when it will be found upon minute inquiry to have existed for several months in a chronic form, upon which acute symptoms have supervened in consequence of exposure to cold.

In the chronic form of the disease, which is very much the most common, there is for a long period, occasionally for many months, no symptom to attract the patient's notice, or withdraw him from his ordinary employments; till at length gradually increasing debility arouses his own anxiety, or the growing paleness of his complexion excites that of his friends, or the supervention of acute symptoms or of some secondary disorder at once unequivocally announces the presence of disease. It will generally be found, however, upon inquiry, that the urine has been very long scanty, or too abundant, or occasionally of a cherry-red colour from a little blood; or, that it was passed frequently and with difficulty, or with positive pain, and almost always, that he was awakened regularly once, or oftener, in the night by the necessity of passing urine; or that there were frequent gnawing pains in the loins or flanks, extending at times to the thighs, or groins, or scrotum. There is, when the disease is fully formed, reduction of the strength; emaciation, not always, however,

considerable ; a remarkable uniformity, and commonly great paleness, yet on the other hand, at times, a peculiar pale-brownish dinginess of the complexion ; defective transpiration as indicated by a dry state of the skin, and the want of perspiration under exercise ; often a tendency to drowsiness ; often, too, weakness of digestion or even well-marked dyspepsia, not unfrequently attended with sickness or retching in the morning on awaking from sleep ; thirst ; a diminution of the solids of the urine, and consequently a diminution of its specific gravity or density, together with other variable changes of this secretion ; and finally a change in the composition of the blood from a constant diminution of its colouring matter, and not unfrequently the unnatural presence of urea in the same. The morbid alterations of the urine and of the blood above specified, are characteristic of the disease, and with the unhealthy complexion are its only invariable symptoms.

State of the Urine. In the *early stage*, the urine is reduced from between thirty-five and fifty ounces, the natural average, to eight, ten or twelve ounces daily, sometimes to two or three ounces ; sometimes it is entirely suppressed. Sometimes it presents a blood-red tint of more or less intensity ; or, occasionally, the tint is so deep as to render it opaque ; in a few instances, clots of blood are intermingled with it ; and still more rarely, the fluid discharged seems to consist of nothing but blood, which partially coagulates. Hæmaturia from other causes may be distinguished by the urine ceasing to present coagulability so soon as it ceases to be red. Most frequently of all, the colour of the urine deviates little from that of health ; it is then often rendered muddy, however, or opalescent by the presence of fine light particles of modified mucus. Lithic acid or lithate of ammonia is sometimes deposited when the urine cools. Occasionally, but very rarely, except from decay of the urine by long standing, there is a white sediment of the earthy phosphates. When loaded with albumen, the urine froths easily, or may be blown into bubbles. The urine is unusually subject to decay, and its coagulation by heat may thus be prevented. In the truly incipient stage, the density or specific gravity lies always within the limits of health. The specific gravity of healthy urine varies from 1016 to 1030, where no temporary cause exists to occasion an increase of the watery part of the secretion, while the *average* is 1024 or 1025, the specific gravity of water being 1000. In the earliest stage of granular degeneration of the kidneys, the urine is commonly from 1021 to 1025, rarely as low as 1016, except where its quantity rather exceeds than falls short of the natural average. The most remarkable property of the urine, in the present stage, is coagulability under the action of heat and acids, owing to the presence of albumen, which, sometimes, however, suddenly disappears for a time.

In the early stage, likewise, the absolute quantity of the natural solids of the urine voided in a given time, is much diminished, hence the density of the urine, after the albumen, its unnatural ingredient, has been separated from it in the early stage, falls from four to seven degrees. Twelve ounces of urine, of the density 1016 after separation of the albumen, will probably constitute a fair estimate of the daily discharge in a very great proportion of cases at a moderately early stage; and this estimate infers the diminution of the daily discharge of solid matter to at least one-fourth, or nearer one-sixth of the healthy average.

In the *advanced stage*, the urine is very often but little reduced below the standard of health; frequently it rather exceeds than falls short of it; in not a few cases it is much increased, even sometimes to 130 ounces daily, when diuretics nor articles of diet have produced the effect. The quantity is reduced, however, where inflammatory symptoms supervene, and especially when coma occurs. It is also reduced when granular degeneration has been allowed to go on to an excessive extent, without life being destroyed, as more usually happens, by some secondary affection. Sometimes, in the latter case, the urine falls to twelve or sixteen ounces daily, for a long time before death. In one very remarkable case, the quantity, for nine days before death, did not exceed one ounce daily. The colour of the urine is sometimes nearly natural; much more frequently it is very pale, and in the most advanced cases so pale as to be almost colourless; not unusually it is for a time cherry-red, obviously from blood, or reddish brown, or pale smoke-brown, all of which colours give place to the natural straw tint when the albumen is coagulated by heat; occasionally it is of a peculiar lemon, or rather orange tint, which also disappears on coagulation of the albumen. Slight muddiness, probably from modified vesical mucus, very commonly exists; in a few rare cases, perfect mucus, in viscid strings, is discharged. Sometimes lithic acid, or the phosphates, are deposited in this, as in the early stage.

As the disease passes beyond the early stage, and the granular deposition proceeds, the density of the urine sinks to 1016, 1014, 1012; and when the case has reached the advanced stage, it is usually as low as 1010, 1008, or 1007, even when the quantity is rather under than over the natural standard; in one case it was only 1004, where the quantity of urine was not in excess; in another, noticed by M. Solon, it was 1003, but the urine amounted to forty-four ounces; in a single case, also, it was once found as low as 1001.5, but in that case there was no certainty that the urine was free from admixture with other liquids. A low density, however, is an essential character of the urine

in the middle and final stages, whether its quantity be great or small ; and the density goes on diminishing as the disease advances.

It is a great mistake to suppose, as some do, that the proportion of albumen in the urine, necessarily increases as the disease advances ; the very opposite is the general rule. When the disorganization has proceeded very far, slight haziness is all that heat or acids will occasion ; and often enough, no alteration whatever is produced ; but in such circumstances, however, the incidental recurrence of acute symptoms, with irritation of the kidneys, may cause the albumen to reappear in abundance for a time. Generally, the amount of albumen varies a great deal more than in the early stage ; most generally it separates in a few fine flakes, which subside after agitation, so as to occupy from a fourth to an eighth of the mass. Sometimes the albumen will disappear temporarily, at other times permanently, as already stated.

The presence of albumen may be detected by various chemical tests, such as heat, nitric acid, corrosive sublimate, and ferro-cyanate of potash ; all of which separate a flaky precipitate. But the most convenient, and the most conclusive, are the first two ; namely, heat, and nitric acid. At a temperature a little above 160° Fahr., the urine, in the early stage, and generally, too, in the advanced stage, becomes turbid, and complete coagulation of the albumen gradually takes place, as the heat rises to ebullition. If there is any deposit of lithic acid, or lithate of ammonia, this, in the first instance, is dissolved, and the urine becomes clear. Muddiness from other causes, more especially from modified mucus, is not thus dissolved, however ; and hence, where the muddiness is considerable, it is often well to filter the urine before testing it. A tube about one-third of an inch in diameter is much better than a spoon for testing the urine. To promote the future study of the disease, the following nomenclature of the different degrees of coagulability is strongly recommended : 1. *Gelatinous by heat* ; where the urine is converted into a gelatinous mass. 2. *Very strongly coagulable* ; where a precipitate distinctly separates by heat, and yet occupies, in twenty-four hours, the whole, or nearly the whole, fluid. 3. *Strongly coagulable* ; where the precipitate, in twenty-four hours, occupies half the volume of the fluid. 4. *Moderately coagulable* ; where it occupies a fourth of the fluid. 5. *Slightly coagulable* ; where it occupies an eighth of the fluid. 6. *Feebly coagulable* ; where it occupies less than an eighth of the fluid. 7. *Hazy by heat* ; where the urine becomes cloudy, but does not form visible flakes a few seconds after being boiled. In appreciating the last degree of impregnation, it is convenient to heat only the upper half of the fluid in the tube.

It is advisable to make use of nitric acid as a test, as well as heat. For first, if the urine is ammoniacal, the action of heat may be prevented, even where the proportion of albumen is great. Secondly, heat alone may occasion a flaky precipitate, where there is no albumen, owing to the superabundance and consequent separation of earthy phosphates; a deposition which nitric acid will both prevent and remove. And thirdly, nitric acid alone may occasion a flaky precipitate of lithic acid, which, however, is re-dissolved by an elevation of temperature, while albumen remains insoluble. The urine should be always tested, if possible, before it decays and becomes ammoniacal, as not only the coagulable power of heat is prevented by the decay of the urine, but sometimes nitric acid fails to separate a coagulum, owing, probably, to the albumen itself having undergone more or less change, along with the other principles of the urine. It should have been mentioned that nitric acid separates the albumen always in the form of flakes or pulp. Should the urine be slightly alkaline, the coagulating power of heat may be obtained by previously adding, in drops, a very small portion of some acid.

Healthy urine contains either no albumen, or a quantity so small, or so much altered from the ordinary properties of that principle, as to render it undistinguishable by the best chemical tests. But a variety of irritating causes may lead to an albuminous impregnation. Any cause which may occasion hæmaturia, or a discharge of blood from the kidneys or bladder, will, of course, introduce albumen into the urine. Indigestible articles of food, a cantharides blister, the erythimal action of mercury, and pregnancy, may produce an albuminous secretion from the kidneys.

M. Solon has discovered that albumen is found in the urine for a short time during the period of crisis of some acute and inflammatory diseases. But there is no cause by which an albuminous impregnation of the urine is so frequently induced as by granular degeneration of the kidneys, and there does not appear to be any cause whatever, which will occasion the enormous accumulation of albumen in the urine, almost invariably observed in the early stage of this disease, when it commences with acute symptoms. Although, therefore, the simple presence of albumen does not alone indicate the disease, yet its presence, in large quantities, may be considered as decidedly pathognomonic.

A diminution of the solids of the urine, both relatively and absolutely, is an invariable character of the urine in the advanced stage of the disease. The total solids of the urine, in a state of health, are 67.7 parts in one thousand, when the density is 1029, and the quantity thirty-four ounces

avirdupois. In the disease, the proportion of solids in one case was reduced to twenty-four parts, where the quantity of urine, in twenty-four hours, amounted to twelve ounces, and the density was 1009.5. In another case, the proportion of solids was fifteen parts in one thousand, when about thirty-six ounces of urine were passed at the very low density of 1006.9. In the latter case, the total solids discharged in the day were reduced to one-fifth, and in the former to one-twelfth, of the healthy average.

It appears, then, that the pathognomonic characters in the advanced stage, are a great reduction in density, and an equal reduction of the daily discharge of solids, frequently associated with the presence of albumen in small quantity. Deviations are, however, more apt to occur here than in the early stage. The most important are the frequent absence of albumen, and the daily discharge of the full amount of solids, owing to spontaneous diuresis. The only character absolutely invariable is great lowness of density, with, of course, a reduced *proportion* of solids.

State of the Blood. — Granular disorganization induces a variety of important changes in the composition of the blood. In the early stage it coagulates with a thick, firm, and commonly cupped, buffy coat; the serum is usually somewhat lactescent, and yields to sulphuric ether, when agitated with it, a small portion of concrete oily matter, which seems to differ little from the fat of the cellular tissue.

The most remarkable alteration, however, of the serum, which appears to be an invariable character in the early stage, is a great decrease in density, together with a corresponding reduction of its solid ingredients. This state of the serum, with certain exceptions, seems to be peculiar to that stage. The natural density, 1029 to 1031, is reduced to 1022, often to 1020, and occasionally to 1019. The solid contents are reduced from 100 or 102 in a thousand, to 68, 64, or even 61. The reduction appears to affect equally the albuminous and saline contents of the serum. It occurs only when there is an abundant discharge of the albumen with the urine; but then invariably. On account of the loss of albumen, the serum coagulates loosely when heated.

Another not less remarkable change in the composition of the serum, is the presence of urea in it, and in large quantity. Urea is invariably found in the serum at all stages of the disease, when its natural discharge by the urine is diminished materially, that is, to about one-third of its usual amount. When the quantity of the urine in the early stage, from the effect of treatment or otherwise, equals or exceeds what is natural, urea cannot then be detected satisfactorily, although, still, traces of its

existence may be elicited. The most certain way of separating it from the blood, is to evaporate the serum to perfect dryness in the vapour bath, to boil the pulverised residue in absolute alcohol of 796, to drive off the alcohol, to dissolve the residue in water, which must be afterwards filtered through a previously moistened filter, for the separation of fatty matter, and lastly, to concentrate the watery solution to a small bulk, and add half its volume of nitric acid in a watch-glass. Sometimes immediately the whole mass becomes solid, as it were, by the abundant crystallization of the nitrate of urea; sometimes a scantier crystallization forms in a few minutes, or an hour at farthest; and, occasionally, the only indication of the presence of urea is some effervescence, attended with the peculiar odour which accompanies the action of the acid upon this animal principle, as it exists in urine. In using absolute alcohol instead of the rectified spirit of the shops, the crystallization is rendered more distinctly foliaceous, and more free from colour.

The proportion of fibrin in the blood is usually increased in the early stage from its greatest natural quantity of *fifty-two* parts in ten thousand, to eighty-two parts, or less, provided inflammatory action exists. The degree of buffiness of the blood is a measure of the increase of fibrin.

Hæmatosin, or the colouring matter of the blood, according to Lecanu, constitutes, on an average, 1160 parts in ten thousand in the female, and 1325 parts in the male, in a state of health. Its proportion in the early stage of the disease is little, if at all, affected.

It follows, then, from these statements, that the condition of the blood, in the early stage of the disease, is characterized by the low density of its serum, and a defective proportion of albumen, by the presence of urea, by the frequent increase of fibrin, and by the proportion of hæmatosin being unaffected.

In the advanced stage of the disease, however, the most remarkable character of the disease is the reduction of the colouring matter of the blood, so as that it amounts ultimately to not more than one-third of the healthy average. The reduction is far greater than can be accounted for by the extent to which bloodletting, which also tends greatly to reduce the quantity of hæmatosin, has usually been carried; as it is found to be very great where no blood at all has been lost previously to that which is analysed. No other morbid change is invariably occasioned in the blood by the advanced stage of the disease; but frequently the solids of the serum are also defective, sometimes, on the contrary, in excess; and not unoften, especially if the disorder is very far advanced, the serum likewise contains urea.

Secondary Diseases. — Granular degeneration of the kidneys may exist from first to last, without the occurrence of any secondary disease. It is, in particular, by no means essential that dropsy should always accompany it, as some incorrectly imagine. Nevertheless, the primary disease seldom continues long without other important diseases being superadded. It is surprising how many cases, otherwise obscure in their nature, are made at once intelligible, by being discovered to be secondary to the disorder in question.

The secondary affections, of most frequent occurrence, are dropsy, diarrhœa, pleurisy, and peritonitis; pneumonia, catarrh, dyspepsia, and chronic vomiting; coma, with other affections of the head; chronic rheumatism, organic diseases of the heart, and organic diseases of the liver.

It is well known that *anasarca* was the disorder which first drew the attention of Dr. Bright to granular disorganization of the kidneys; and it is still the disorder which leads more frequently than any other secondary affection, to the discovery of the disease in these organs. The proportion of dropsies dependent in part, or wholly, upon organic disease of the kidneys, is very great. It has been found to be in Edinburgh three-fourths, and in Strasbourg one-half.

Anasarca is so very generally present at one period or another of the disease, that it has commonly been viewed as one of the essential symptoms.

All cases of anasarca, where the œdematous parts do not pit on pressure, appear to be connected with granular disorganization of the kidneys; also all dropsies where the urine is steadily above the healthy standard in point of quantity, except in the instances of dropsies attending the advanced stage of saccharine diabetes; and likewise it is probable that all dropsies, where the urine, not being above the healthy standard in quantity, is also below 1010 in density, whether the urine be albuminous or not, occur in connection with the same disease. Those cases of anasarca which do not pit on pressure, are commonly of the nature of acute or inflammatory dropsy. There are many more cases, however, of kidney dropsy, not of an inflammatory character, in which the anasarcous swelling pits readily.

Next in point of frequency to anasarca, perhaps even on a par with it in that respect, is *dyspepsia*, which, at times, puts on the form of chronic vomiting. The affection of the stomach is often greatest when the circulation is unusually languid, the morbid action in the kidneys purely chronic, and all other organs free from acute disease.

Diarrhœa is a very common secondary affection. It is sometimes a

mild affection. It is sometimes a mild affection ; and often it is excessively frequent and exhausting. Diarrhœa, and dysentery, which sometimes precedes it, are much more frequent and obstinate complications in Edinburgh than in London and Paris.

Pleurisy and peritonitis, on the contrary, are much more frequent in London and Paris than in Edinburgh. *Pleurisy* is the most frequent of the serous inflammations ; *peritonitis* is, upon the whole, rare ; *pericarditis* is also seldom seen.

Pleurisy and *peritonitis* sometimes pursue so latent a course that, without the aid of percussion and auscultation, or inspection and palpation, they would probably escape attention altogether.

Catarrh, both acute and chronic, is a frequent complication. Except in the summer months, there are few cases without more or less of it. It is often associated with pulmonary emphysema, but, also, frequently exists independently of such organic derangement ; it is, however, most severe when thus associated.

Among the most formidable of the secondary diseases, are *coma* and *apoplexy*, or various diseases of the head more or less allied to apoplexy. It is not, perhaps, quite correct to consider these affections as secondary, for death by coma seems to be the natural termination of the disease, as already stated, where life is not cut short by some other affection of an incidental or secondary nature.

Among the more frequent of the secondary affections, may be enumerated *chronic rheumatism*. It is more generally met with where anasarca is inconsiderable, or where it has been removed. It is for the most part, a troublesome and obstinate secondary complaint.

Pneumonia appears to be a rare complication. Two cases which were very severe, were yet removed by treatment ; two others were latent, and not discovered till after death.

With the exception of anasarca, and perhaps catarrh and dyspepsia, no complication is more common than enlargement and obstruction of the heart, or enlargement and tubercular derangement of the liver, or organic disease in both viscera at once.

The symptoms referable to the heart indicate, sometimes, enlargement of the left side, sometimes of both ; and the enlargement is often attended with the signs of valvular obstruction. The disease of the head is sometimes the primary disease, and the disease of the kidneys a secondary affection. Disease of the heart, especially when somewhat advanced, renders other secondary diseases, particularly catarrh and anasarca, much more intractable.

The complication of *diseased liver* is, perhaps, even more frequent

than that of diseased heart. If the liver is enlarged, percussion will readily define its extent; but if not, as is usually the case in tubercular disease of that organ, the attention of the physician may not be called to it during the life of the patient, and he may only discover disease at the *post-mortem* examination. The ordinary symptoms of diseased liver, such as pain and tenderness across the stomach, and under the right ribs, sense of weight in the latter quarter, sympathetic pain in the back, weakness of digestion, dinginess of complexion, and the like, are far from being always present, and must also be considered as more or less equivocal, because they are often occasioned by disease of the kidneys alone. Whenever ascites exists to a great degree, or forms the prominent dropsical affection, there is very great probability that the liver is seriously disorganized, even though all the other usual signs are dubious.

Granular degeneration of the kidneys, at a moderately advanced period of its progress, appears to render the body peculiarly open to the invasion of some *epidemic diseases*. The kidneys have been frequently found far advanced in granular disorganization in cases of death from typhus, which for some years has been extensively epidemic in Edinburgh. And the same morbid appearance was found in a considerable proportion of the fatal cases of malignant cholera.

Causes of the Disease. — In the generality of cases, or those of the chronic form, the disease establishes itself so silently and gradually that the exciting cause is inappreciable. In the great majority of acute cases, the disease is referable to some decided exposure to cold, or to cold and wet together; in other cases, however, of this form, no adequate exciting cause can be discovered.

In the greater proportion of cases, namely, in almost all those of a chronic nature, as well as in a few where the symptoms are acute, the disease appears to be formed gradually, without any exciting cause, under the influence of some depraved state of the general constitution. And even in many acute cases, arising apparently in decided exposure to cold, the disease has silently originated in some constitutional cause at an earlier period, whereas recent exposure has merely superadded some acute secondary affection, or given an acute character to pre-existing essential symptoms.

Of all predisposing causes, none are so influential as intemperance. The cases referable to excessive or more moderate intemperance, amount to three-fourths or four-fifths of the whole. The effect of ardent spirits in stimulating the kidneys to augmented secretion, will, when it is used for some time, though not to great excess habitually, account for its deleterious influence.

The scrofulous diathesis is so constantly found associated with granular disorganization of the kidneys, that it seems to exercise even more influence over its production than intemperance. However this may be, the disease is in no instance developed with greater certainty than where habits of intemperance have been engrafted upon a strumous taint of constitution.

Among the predisposing, if not even among the exciting causes, may be mentioned *scarlatina*. A very large proportion of all cases of dropsy consequent upon scarlatina, are connected with granular disorganization of the kidneys, in more or less of which, disease of the kidneys has no doubt pre-existed.

In reference to the *prognosis*, it need only here be said that even where the disease has reached a pretty advanced stage in its progress, the patient may be brought by due treatment into such a condition, as to live without material uneasiness for a term of years, of which our present knowledge cannot well settle the limit, — provided he avoid improper exposure to cold, intemperance, and other irregularities in regimen. It is impossible, perhaps, to remove the disorganization. But its farther advancement may be checked for a time, before it has proceeded so far as to be incompatible with the enjoyment of tolerable health and comfort. Such is, not unfrequently, the result where no other secondary disorder has fastened on the constitution, except dropsy.

In regard to the secondary affections, they almost all present the character of obstinacy when concurrent with granular destruction of the kidneys, particularly dyspepsia, diarrhœa and dysentery, chronic rheumatism and catarrh, but especially diseased heart and diseased liver. Of all secondary affections, the most manageable in the generality of cases is dropsy, although extremely apt to return, especially when the primary disease is far advanced.

Treatment. — Granular degeneration of the kidneys in the acute form is essentially a congestive or inflammatory disorder, and demands vigorous antiphlogistic remedies, whether complicated, or not, with other recent inflammations, such as pleurisy, pneumonia, or the like. General bloodletting should be carried so far, at once, as to affect strongly the pulse and induce approaching fainting; and it should be subsequently repeated according to the state of the circulation, and accompanying local symptoms. The state of the blood should be examined after the first bloodletting, to determine the quantity of hæmosin, since it will indicate whether the disease is in its early or in its advanced stage, as during acute symptoms superinduced on the advanced stage of the disease, active depletion must be used with much greater reserve.

Local depletion, in the form of leeches to the upper and fore-part of the abdomen, or still better, of cupping to the loins, is especially serviceable in removing the rending pains in the loins, and the dull heavy pain and tenderness in the pit of the stomach and across the flanks, which are occasionally troublesome rather early in the disease, even when the circulation is little affected.

After depletion, general or local, has been pushed to the requisite extent, counter-irritation, in the form of blisters, issues or setons, to the loins is advisable.

Diaphoretics, so strongly recommended by Dr. Osborne, in preference to diuretics, may be administered with decided advantage. The most efficient diaphoretic is Dover's powder in the dose of five or eight grains three times a day. With this should always be conjoined the warm bath every twenty-four or forty-eight hours, so important is the re-establishment of the healthy action of the skin. The acetate of ammonia, prescribed by some as a diaphoretic, is more apt to act as a diuretic, and is not as useful as Dover's powder in removing pain, irritability, and restlessness. The latter may often be attained equally well by the extract of hyoscyamus. James' powder is also a good diaphoretic. Diaphoretics, however, have proved far more useful in the hands of Dr. Osborne than in those of Dr. Christison.

Laxatives are occasionally useful, particularly the compound colocyath mass, with half its weight of extract of hyoscyamus. Brisk purgatives, which are sometimes very useful in aid of other antiphlogistic remedies, should not be repeated too frequently, otherwise a troublesome, obstinate diarrhœa may be induced, to which there is a natural tendency in the progress of the disease. In certain secondary affections, however, more especially in dropsy, or when coma threatens, active cathartics often prove the only effectual means of averting the pressing secondary evil.

The general antiphlogistic regimen as to diet, exercise, and the like, should be insisted upon, and by no means relaxed till the force of the circulation has been broken. Subsequently, vigorous prophylactic measures should be adopted to prevent a relapse. Among these the most important are warm clothing, and careful protection against cold and damp; nutritious food of easy digestion, and not in excess; abstinence from spiritous liquors, with a very temperate use of wine, if used at all; regular brisk exercise, and occasional warm bathing, — in short, all such means as may best contribute to promote cutaneous transpiration, and moderate the demand upon the kidneys.

Diuretics are proscribed in the treatment of the acute primary stage

of the disease by the best authorities; and some forbid their employment in the secondary affections, in a part of which, however, no other remedies are so promptly efficacious, and experience has proved that they have not, in such cases, increased the original disease of the kidneys, as far as symptoms could indicate their influence.

Mercury is also prescribed in this disease, in the primary stage of which mercurial erythism with increase of the albuminous secretion is readily induced, by its incautious administration. It may be carefully used, however, in small doses, to promote the action of the diuretics and cathartics, and should its effect upon the mouth occur, under such circumstances, this has not appeared particularly unmanageable.

The treatment of the advanced stage of the disease, consists of the prophylactic measures already advised to prevent a relapse of the acute stage, and can only arrest the further progress of disorganization, and thus secure the continuance of pretty good health for a considerable time, with great liability, however, to an increase of the disease from undue exposure, or any departure from the proper prophylactic measures.

The *treatment of the secondary diseases* is fully as important, or even more so, than that of the original disease. They greatly impair the general health and endanger life, and are more under the influence of remedial means.

Their treatment is identical with that which is resorted to for the removal of the same disorders in ordinary circumstances, that is, when they are primary in their nature. The employment of the usual remedies, however, is subject to important modifications, or must be governed by peculiar rules, which would here be introduced with great pleasure, as they are, like the whole work, highly practical, but the space allotted has already been exceeded. This work is one of a most practical character, and cannot be too highly recommended to every member of the profession. There are very few to whom it will not most vividly recall obstinate cases of disease which could not have been fully understood without some previous knowledge of the researches of Bright, or of those few who have so ably followed in the path of observation which he pointed out in 1827, among whom, besides Christison, may be very honourably mentioned, James Gregory, Osborne, Rayer, and Martin Solon.

The intention previously expressed of employing, as far as practicable, in the foregoing analysis, the language of Dr. Christison himself, has been so fully carried out, that it consists almost exclusively of abstracts from his valuable work.

J. A. W.

A Treatise on the Diseases of Children. By M. C. BILLARD, M.D. Paris ; founded on recent Clinical Observations and Investigations in Pathological Anatomy. Translated from the Third French Edition, with an Appendix, by JAMES STEWART, M.D.

NOTWITHSTANDING the extraordinary progress that has been made of late years in pathological anatomy, and the zeal with which the morbid results of disordered action have been investigated, in nearly every organ of the human body, yet these inquiries have been almost universally limited, to the effects of disease in adults, while the still more interesting changes produced in the organs of the infant and child, either by the same diseases, or by those peculiar to those states have been neglected. We think we shall be sustained in calling them *more interesting*, if it be considered that, in the first place, they are far more prevalent, and in the next, that as the organs of childhood are in a rapid state of developement, that during this period all the powers of nature are at work, building up the edifice, the alterations of structure, induced by deranged action are more evident, more rapidly effected, and their *modus operandi* more exposed to our observation than the comparatively slow and tedious modifications of the adult system ; it would be, therefore, not unreasonable to anticipate, that a careful and minute examination of the morbid anatomy of the child may throw considerable light on the more obscure pathology of the adult. Although fully impressed with the justice of this view, yet we see the almost impossibility of making an extended series of observations, with merely the opportunities afforded by private practice ; every physician is aware of the unconquerable aversion in parents to the examination of their dead children, therefore, it is only in hospitals and other institutions especially dedicated to the treatment of children, where this all important object can be attained. The profession, then, and we may add, every parent, is deeply indebted to M. Billard, for having entered this all but uncultivated and yet fertile field.

The work of M. Billard is the first extended attempt to investigate the pathological state of the organs in connection with the symptoms of the diseases of infancy and childhood ; it has rapidly passed through three editions, and obtained deserved celebrity for its author. M. B. was placed in a peculiarly advantageous position as “Interne” of the Foundling Hospital at Paris, where he had the opportunity to observe closely practice of the celebrated Baron, and to examine the dead bodies of those children who sank under the violence of their disease. “In one year he was enabled to examine the condition of 5300 infants, and to extend

his anatomical researches to nearly 700." The author appears to have made use of his opportunities with care, zeal, and industry, and has produced a work which ought to be in the hands of every practitioner, as although the profession have the valuable and practical works of Underwood, Gardien, Dewees, Eberle, Burns, &c. ; yet, as we have already said, the work of the present author is on entirely new ground.

The principal divisions of the work are as follows : " The considerations of the phenomena which are presented upon examining externally the condition of the child." This is a highly important subject, which perhaps is not sufficiently treated in the present work, but we shall hereafter make some observations on it. " Diseases of the skin." The author proposes a new method of classifying cutaneous phlegmasia, and gives a brief synopsis of the various cutaneous diseases. " Diseases of the digestive apparatus." This is a very valuable portion of the work, and illustrated by a large number of autopsies. " Diseases of the appendages of the intestinal canal." " Diseases of the urinary apparatus." " Peritonitis." " Ascites." " Hernia." " Diseases of the respiratory apparatus." " Diseases of the circulatory apparatus." " Of the cerebro-spinal apparatus." " Of the organs of locomotion." " Of the organs of generation." " Of the lymphatic system." " Of the eyes." " Jaundice of infants." " Of accidental tissues," and " on alteration of the blood." In addition, there is a select formula for infants, and the French work concludes with a medico-legal dissertation on viability, considered with reference to the pathology of new-born children.

Like most French authors, the writer gives in many parts of the work very meagre details of treatment, but this has been in some degree compensated by judicious and practical notes, added by the translator, in an appendix, which very much augments the value of the book. This work has been translated by Dr. James Stewart of this city, who has proved himself well qualified for the task, by the excellent manner in which he has executed it, and deserves great credit for having thus insured a far more extensive circulation to the valuable information communicated by the author, than it would probably have obtained in the original. The New-York edition has been stereotyped in a superior manner, and will add to the reputation of the enterprising publisher.

As our copy has only been in our possession two or three days, it has been impossible for us to do more than give this very brief and general sketch of its contents, but it is our intention, in our next number, to give a full analysis of it in detail.

J. C. B.

A Treatise on the Eye, containing Discoveries of the Causes of Near and Far-sightedness, and of the Affections of the Retina, with Remarks on the Use of Medicines as Substitutes for Spectacles. By WILLIAM CLAY WALLACE, Occulist. Second Edition. New-York, 1839, 12mo. pp. 88.

THE author of this little volume, about three years ago, published a popular treatise on the "Structure of the Eye with Reference to Natural Theology." The present work is a modification of this, with the addition of some original observations, which give it a special claim to the attention of the profession.

The author has applied himself, with some success, to the minute anatomy of the eye, and, in the words of Sir David Brewster, who, some time since, presented a series of his dissections to the British Association, one of the most important results of his investigations is the discovery of fibres in the retina. We would also add, that his account of the apparatus by which the eye is adjusted to distances, and his observations on the pathology of the retina, are equally novel and important.

About three-fourths of the volume are taken up in describing the apparatus of vision, and in applying this to illustrate the wisdom of the Creator, by the admirable adaptation of means to ends, in the structure of the eye and its appendages.

In the next section, the author has given an exposition of his peculiar theory, as to the means by which the eye is adjusted to distances: and, adopting the opinion of Kepler, that this adjustment is principally effected by the movement of the crystalline lens, he goes on to describe the organs by which, as shown by his own investigations, this movement is accomplished. These organs vary in the different orders of animals, according as the crystalline lens or magnifier, is greater or less than a sphere, or perfectly spherical.

"In the shifting of an ordinary magnifier, we must be careful to keep every part of the edge at an equal distance from the space it formerly occupied, or it will be turned away from the object: we cannot, therefore, adjust it by traction at a single point. What happens in this respect to a magnifier which is less than a sphere, will also happen to one which is greater; but with a perfect sphere it is immaterial whether the attraction be made at a single point or at a number."

With that economy, therefore, which exists in all the works of nature, we find only a single instrument for adjusting the magnifier when one only will answer the purpose: that is, when the magnifier is perfectly

spherical, as in the striped bass, the halibut, and many other fishes; but in man, and other animals, in which the magnifier is less than a sphere; and in the cuttlefish, and such other animals as have a magnifier greater than a sphere, one instrument only would not answer the purpose; and accordingly we find as many of them as can be packed together whenever their services are required.

“In a large perch found on the American coast, called the Striped Bass, there is a triangular muscle attached to the sheath of a nerve which enters at the back of the eye, and runs along a division at the lower part of the retina. One of the angles of the muscle is fixed to the magnifier: and another, after passing through a loop at the back of the coloured circle round the pupil, is inserted into the membranes of the vitreous humour. When the muscle contracts, the magnifier is drawn forward and adjusted to near object, while it is drawn back again or regulated to distant objects, by the elasticity or spring of the membranes of the vitreous humour.”

“In the halibut, the muscle, which is of a different shape, and larger than in the striped bass, does not pass through a loop, but lies diagonally across the eye, having one attachment to the magnifier and another to the coloured circle round the pupil. The magnifier is drawn forward when the muscle acts, and when the former is removed, it is drawn back again by the elasticity of the membranes of the vitreous humour.”

In those animals in which the magnifier is either greater or less than a sphere, according to our author, the adaptation of the lens to different distances in vision, is mostly accomplished by retraction or lengthening of the ciliary processes, and their immediate attachments.

“Immediately behind the coloured circle round the pupil, and attached to the external margin of the case of the magnifier, there are about seventy or eighty vascular membranes, resembling leaves, and called the ciliary processes, which are placed round the magnifier, like the petals of a flower.” * * * *

“At the root of the adjusting leaves there are muscles with radiating fibres, which are covered by a white ligamentous substance, and a thin dark skin which lines the eye, and keeps them from being readily observed. The vessels which supply the adjusting leaves, pass at the junction of the muscle — a spot where they are not affected by pressure — while the returning veins are so situated that the progress of the blood as it passes through them may be arrested.”

“When the muscles contract, an additional quantity of blood is collected in the adjusting leaves, which being consequently elongated, draw

forward the margin of the case to which they are attached, and, of course, the magnifier with its envelopes, in this manner, adjusting the organ to the vision of near objects, while it is drawn back or adjusted to those which are distant, by the elasticity or spring of the membranes of the vitreous humour, which radiate from the magnifier."

This apparatus he has further illustrated by referring to the anatomy of the eye of the lynx, the turkey-buzzard, and other animals. He next proceeds to explain the uses of the *marsupium* or fan-like membrane found in the eyes of birds. "This," says he, "arises at the back of the eye, where it passes through a division of the retina, and is inserted into the vitreous humour not far from the foremost or inner edge of the magnifier, out of the way of direct vision. The eyes of birds are directed to each side to afford the wide field of vision which their necessities require; yet when this membrane contracts it will alter the position of the magnifier by drawing back the inner edge, and thus enable the bird to look straight forward. From numerous dissections, I believe it to be established, that the marsupium becomes smaller in proportion as the direction of the eyes becomes parallel."

The third section of the work has a practical bearing on the means best calculated to preserve the vision unimpaired, and on the improper use of spectacles. It is generally believed that as age advances the cornea becomes flattened, and that hence arises the necessity for spectacles. Such, however, is not our author's view of the subject. The eye, says he, is seldom flattened by age, but, on the contrary, it is often of unusual convexity, in consequence of the contraction of a portion of the circumference which forms a semi-opaque ring, well known to oculists under the name of *arcus senilis*; yet the persons thus affected are obliged to wear convex spectacles. According to his view of the subject, the vision of aged people becomes lengthened by the impaired action of the adjusting apparatus. As this apparatus becomes stiff with age, the magnifier cannot be brought sufficiently far forward to adapt the eye to near objects, and the person is obliged to remedy the defect by using glasses. Any cause that tends to relax the adjusting apparatus, as grief, general debility, excessive use of the eyes, &c., will also impair the vision:—hence the effect of certain medicines, as stramonium, deadly nightshade, henbane, &c., in accommodating the eye to the vision of distant objects.

The modes of treatment to be resorted to for relief of far-sightedness, are to be drawn from the causes giving rise to it. Our author is opposed to the indiscriminate use of spectacles in such cases. We cannot enter into the details of the practice he suggests—the indications which he has laid down being of themselves sufficient to point to this; and as his

work has an eye towards the general reader, he is not, perhaps, as definite in this department of his subject as he might have been.

He fixes the cause of shortsightedness, in most cases, also in the adjusting apparatus. "Shortsightedness is far more common among the higher than among the lower classes of society, and most frequently occurs about the time of puberty — a period when there is often a morbid excitement of all the erectile tissues. As a portion of the adjusting apparatus of the eye belongs to this class, it partakes of the general erethysm of the system, and occasions the complaint by drawing the principal magnifier too far forward."

The latter part of the volume is taken up with an inquiry into "the Proximate Cause of Affections of the Retina." This is the substance of an essay which was read, about two years since, before the New-York Medical and Surgical Society, and contains some important views on the pathology of the retina.

In conclusion, we would remark that the work is interspersed with a great number of wood-cuts for illustrating the structure of the eye and its appendages. In taking leave of our author, we would respectfully suggest to him, that the professional, rather than general reader, should be the one to whom those who claim to be improvers in pathology, or discoverers in anatomical or physiological science, should address themselves.

J. W.

Intermarriage; or, the Mode, in which, and the Causes why, Beauty, Health, and Intellect result from certain Unions, and Deformity, Disease, and Insanity from others. By ALEXANDER WALKER. New-York, J. & H. G. Langley & Co., 1839. 8vo. pp. 384.

THIS singular work is evidently the production of an acute and observing mind, which has entered upon a comparatively new field of study. We confess that we are unable to admit all the propositions that it contains, not because they appear contrary to reason, or even to facts, but because the subject is a new one. If we have been startled and amused, rather than instructed, we are far from thinking the subject a mere matter of speculation; we are satisfied that it is not so, but that it opens a path of observation which must lead to results of signal benefit to mankind. Some of the conclusions to which our author has arrived, and which will serve to convey a correct idea of the manner of the work, are the following: 1st. *Where both parents are of the same variety, (or race)*

one parent communicates the anterior part of the head, the osseous or bony part of the face, the forms of the organs of sense, and the whole internal nutritive system. The other parent communicates the posterior part of the head, the cerebellum, and the whole of the locomotive system. 2d. *Where each parent is of a different breed or race, and both of equal age and vigour, the male gives the back-head and locomotive organs, and the female the face and nutritive organs.* 3d. *That in in-and-in breeding (i. e. where both male and female belong to the same family,) the female gives the locomotive system, &c., and the male the vital system, &c.*

The chapter on the *law of sex* is very obscure ; the author, so far as we can understand him, appears to say that the reproductive organs might be expected to go with the vital or nutritive organs ; but this is not always the case ; the parent possessing the most vigour will stamp the sex upon the offspring.

With regard to the communication of *mind* by either parent, our author seems to think that the parent giving the forehead and the organs of sense, &c. bestows also the organs of sensation and observation. While that giving the back-head communicates the organs of passion and volition, and that the actual communication of either in a given case, depends very much on the relative condition of the parents during the act of reproduction ; one sex being always relatively active, the other relatively passive, the former will communicate passion and volition with locomotion, &c., the latter, or more passive, the organs of observation, sensation, and nutrition.

We doubt whether we have made a very clear statement of the above propositions. The truth is, the author, with all his acuteness, has sometimes travelled beyond his facts, and that, too, in a region full of mysteries — hence, as might be expected, all is not clear as day-light. The work, we are told, has met with a very extensive sale, and yet, we are convinced, no one but a professional man can understand it at all — and he will value it more for giving him new subjects for reflection, than for the actual instruction it has afforded him.

J. A. S.

A Winter in the West Indies and Florida. By an Invalid. New-York, Wiley & Putnam, 1839, 12mo. pp. 199.

WE are anxious to notice the above work, because we are satisfied that it contains more discriminating knowledge as to the fitness of these places, as to climate, comfort, &c., than any thing that has yet been pub-

lished. The author, it is true, is not a medical man, but he is a man of intelligence, observation, and candour. He has evidently written, not to make a book, but to give correct and valuable information. Every one who has examined the subject of climate, as a remedial agent, must, we think, have been forcibly struck with these two prominent facts — the great want of discrimination among practitioners, as to the kind of climate suitable to individual cases, and the great difficulty of obtaining accurate information as to the true merits and condition of particular places. Thus, a patient is sent ‘*South*’ in general terms, to St. Augustine, or Mobile, or St. Croix, or Cuba, just as it suits his convenience, or according as one place happens to be more in vogue than another. And again, as to the means of obtaining positive intelligence of the climate of particular places, we are obliged to depend entirely upon the opinions of invalids, each taking his own case as the standard. Thus two persons will visit the same spot the same season — one will call it too hot, the other too cold, too damp, or too dry, according to its effects upon his own peculiar case. There is, again, the danger of deception from speculators, who *puff* certain locations because their interest lies there, just as Indian Key, on the coast of Florida, was exalted in one of our papers the last season. The work before us is remarkably free from either of these sources of error. For the account of the climate and advantages of particular places, our limits compel us to refer to the work itself.

J. A. S.

- I. *An Introduction to the Study of Chemical Philosophy; being a preparatory View of the Forces which concur to the Production of Chemical Phenomena.* B. J. FREDERICK DANIELL, F.R.S., Professor of Chemistry in King's College, London, author of “*Meteorological Essays.*” London, 1839. 564 pages; numerous wood cuts.
- II. *Elements of Chemistry, Theoretical and Practical.* By D. B. REID, M.D., F.R.S. &c., Lecturer on Chemistry. Third Edition. Edinburgh, 1839. 905 pages; 612 wood cuts.

THE Introduction to Chemical Philosophy, is a work admirably adapted by its simplicity and purity of style, and its strict adherence to the Baconian method of instruction, to teach the subject upon which it is written; commencing with a lucid explanation of the laws which govern the existence of matter in general, the forces of attraction and repulsion, homogeneous and heterogeneous cohesion, gravity, elasticity, &c.,

and drawing proofs from the most simple and well known substances, it advances by regular and easy gradations, to the more abstruse departments of chemistry, unfolding each with perfect clearness to the view of the student. Its illustrations of the theory of atomic combination, the law of equivalents, and elective affinities, are brief, yet comprehensive, and so plainly told, that his must be a very inefficient memory who cannot retain them from the first study.

A fair idea of the *mode* of the book may be drawn from the following paragraph, which clearly indicates the *inductive spirit* which prevails throughout.

“§ 439. Our *qualitative* analysis of the classical elements has thus conducted us to such a preliminary acquaintance with the metallic elements as a class, and of the specific characters of the non metallic elements, oxygen, nitrogen, hydrogen, and carbon, as will enable us now to proceed to their *quantitative* relations, and the illustration of the laws which limit the action of chemical affinity in composition and decomposition.”

The work before us being intended, as stated in the title, to present a *preparatory* view of chemical phenomena, the author has deemed it proper to omit, except in a small degree, the introduction of the plan of *symbols*, so much in vogue at the present day. This useful method of teaching chemistry is more particularly of service to those who are more advanced in the study, but to the beginner, it only adds confusion to a science already sufficiently complicated. The phenomena of electricity, galvanism, and magnetism, together with the operations of electrolysis; and *lastly*, a more complete explanation of the Atomic Theory of Dalton, and of the *Isomorphism* of Mitscherlich, close the work. Appended to it is an ample glossary, with the etymology of the derivative words.

The “Elements of Chemistry,” by another distinguished chemist, seems as if it might have been intended as a *sequitur* to that just noticed, its plan and purposes being such as to present a natural stepping stone from one division to the next, of chemical science. It carries out the plan of the “Introduction,” leading the student by the same inductive method to a knowledge of the more abstruse department of the subject, and to a much more full and comprehensive extent. It is in fact a systematic work on chemistry, differing principally from most others in the arrangement of its parts.

“The object of this work,” as stated in the preface, “is to explain the principles of chemistry, and to describe a systematic and extended series of chemical experiments, with precise and minute directions for performing them, so as to afford a proper foundation for acquiring a

knowledge of the theory of this science, and habits of practical skill in chemical operations."

It will be found to be a valuable assistant, not only to the student, in enabling him to acquire a good practical knowledge of the *modus operandi* of all important chemical manipulations, but to the teacher also, by furnishing him with a new and efficient plan of arrangement for lectures, and with a multiplicity of experiments for their illustration. The method pursued is as nearly inductive as the case will admit. No compound substance is treated of without its elements having been previously explained fully. For example, the book commences with the description of oxygen, as the most widely distributed of all the elements; then follows hydrogen, and immediately after, the compounds of these two are described. Then we have nitrogen, and the compounds of it with oxygen; then sulphur and its combinations with oxygen, and so on through all the simple bodies, which are not metallic, constituting class 1st. Class 2d, embraces the consideration of the metals, and their combinations with non-metallic substances and with one another. Vegetable and animal chemistry are embraced in the next division, and subsequently to all this, we are given the "General Principles of Chemistry," (a subject which the student is now, if he ever will be, capable of understanding,) including the phenomena of chemical action, the doctrine of definite proportions, the atomic theory, the theory of volumes, the chemical nomenclature, an explanation of a new system of diagrams for facilitating the study of chemistry, and also of symbols, which "in the present state of chemistry are as important as figures in arithmetic." (p. 624.) Compendious treatises on the imponderable agents are given in continuation of the plan. Last, but not least, to those who desire to become *practical* chemists, are given chapters on the blowpipe tube apparatus, flatglass apparatus, &c., and copious rules for the analysis of organic and inorganic substances, which "will enable those who have not access to the extended arrangements of a well-stored laboratory, to perform test experiments, at the most trifling expense, and to examine practically on a small scale, while studying at home, all the most important phenomena of chemical science." (Introduct.)

The appearance of these two works within a short period of each other, will, if proper attention be paid to their plan, form the commencement of a new era in the art of chemical instruction. The old mode, now in vogue, is full of troubles and difficulties to the young student, arising, we believe, in a great measure, if not wholly, from the manner in which the subject is presented to him. The work of Dr. Reid is rather too bulky for a medical student's text book; if its size were re-

duced to that of Turner's Chemistry, whereby its weight and price would both be lessened, we have but little doubt that it would be generally adopted by teachers and students. We should be pleased to see the work of reduction undertaken by some able hand.

J. H. G.

Total Abolition of Personal Restraint in the Treatment of the Insane.

A Lecture on the Management of Lunatic Asylums and the Treatment of the Insane, with Statistical Tables, &c. By ROBERT G. HILL, House-Surgeon of the Lincoln Lunatic Asylum, 8vo. London, 1839. pp. 112.

THE object of the work before us is fully stated in the following extract: "I assert then in plain and distinct terms, that in a properly constructed building, with a sufficient number of suitable attendants, restraint is never necessary, never justifiable, and always injurious, in all cases of lunacy whatever." This is a bold assertion. But it is not so startling to those who have been conversant with the management of the insane, on a large scale, in public institutions, as it is to the uninitiated. We have long been convinced that the degree and frequency of personal restraint imposed on the inmates of lunatic asylums, indicate alike the wisdom and benevolence of their conductors. In forming an opinion of the merits of any institution, we would be more influenced by a personal examination of the premises, and by the number of patients found agreeably occupied, or under restraint, than by ordinary printed reports. It is as gratifying to the physician who feels a just pride in the advancement of a science to which he has devoted his life, as it is to the philanthropist, to reflect on the change, we may say, the revolution which has taken place in the treatment of insanity since the commencement of Pinel's labours in 1792. Prior to that period, perhaps a third, or even a larger proportion of lunatics, were chained or manacled, and otherwise treated like criminals. Now, in well regulated asylums, not more than two or three in a hundred are under personal restraint.

Mr. Hill gives a series of tables illustrative of the gradual abolition of restraint in the Lincoln Asylum. In the year 1830, the total number of patients in that establishment was 92; the total number restrained, 54; the total number of instances of restraint, 2364; and the total number of hours passed under restraint, 27,113 $\frac{3}{4}$. In the year 1837, the total number of patients in the asylum was 130; the total number under restraint, 2; the total number of instances of restraint, 3; and the total number of hours passed under restraint, 28. Coercion was finally discontinued in 1837, and the year 1838 was passed without a single in-

stance of restraint. This, it must be admitted, is carrying out the idea of liberty too far, even for the longitude of America, for it is difficult to imagine the management of more than a 100 lunatics for a whole year, without the necessity of restraint, merely for the purpose of carrying into effect medical treatment. But Mr. Hill is like many others who have favourite opinions to establish. He disregards not only things of minor, but of equal or greater importance. Thus he says: "In the treatment of the insane, medicine is of little avail, except, of course, when they are suffering also from other diseases to which lunatics as well as sane persons are liable." This assertion is so opposed to all reasoning, and to general observation, that we are astonished it could have been made by a medical man connected with a public institution. The remark is just, as regards chronic and incurable insanity; but recent madness in all its forms is so connected with, and dependent on, the various pathological conditions to which the human body is liable, that we cannot conceive it any more possible to treat it without resort to medication, than to subject patients with diseases of the lungs or eyes to an exclusive course of moral management.

But the pervading subject of the work is restraint. To this we will return and give its substitutes in the author's own words. "*Classification, watchfulness, vigilant and unceasing attendance by night and by day, kindness, occupation, and attention to health, cleanliness, and comfort, and the total absence of every description of other occupation of the attendants.*"

But to carry this plan fully into effect, it is necessary to have a well arranged building, with various court yards, gardens, and pleasure grounds.

"A proper classification of the patients, more *especially at night.*"

"An adequate number of vigilant and good tempered attendants."

"A variety of occupations suited to the habits and tastes of the patients."

"And a resident medical officer of high moral character, who shall be exclusively devoted to carrying into effect the system of medical and moral treatment, without being burthened with the economical details of the establishment, which can be as well attended to by another officer."

One of the great advantages of this system, Mr. Hill asserts, is the prevention of suicide. He gives a table showing the proportion of suicides to the degree of coercion, during a period of $10\frac{1}{2}$ years, with 334 patients under treatment, when coercion was at the maximum, the proportion of suicides was 1 in 167. During another period of $4\frac{3}{4}$ years, with 242 patients under treatment, when at the medium, it was 1 in $48\frac{1}{2}$, and

during another period, of $3\frac{1}{2}$ years, with 246 patients under treatment, when coercion was in the minimum degree, there was not a single instance of self-destruction.

His plan for the prevention of this most melancholy termination of insanity, is that which has long been practised in the large French hospitals. He associates by night all the suicidal cases in an open dormitory, under the care of a confidential attendant, and says, "nothing else can prevent suicide under any system whatever."

Without claim to originality, Mr. Hill has fully carried into effect what the illustrious Pinel began half a century ago in France. Notwithstanding his bias in favour of the entire abolition of restraint, which must sometimes be impracticable, his zeal and firmness deserve the thanks of the philanthropist, and his example and success the imitation of all engaged in the treatment of insanity.

J. M.

A Guide for Mothers and Nurses, in the Management of Young Children, with Reference to Hereditary or Family Diseases, and Advice to the Pregnant and Lying-in Female. Compiled, in part, from the best English and American Writers. By CALEB TICKNOR, M.D. &c. New-York, 1839. 12mo. pp. 242.

WE have perused, with much attention, this last production of Dr. Ticknor, and find in it a fair amount of readable matter, interspersed with some good advice to mothers, and a good share of what may be denominated small talk.

This is the third work which the author has addressed to the non-professional reader. It was in some degree needed, and, like its predecessors, it will, no doubt, be useful enough in its way. The profession, however, are generally disposed to look with mistrust on works like the present. To the inexperienced mother, although conveying many useful and important precepts, it cannot be considered an all-sufficient guide; and to those who have had experience in the management of children, and who, in time of need, can obtain the advice of their family physician, the medical expositor will be of very little service.

Our friend, Dr. Ticknor, is a judicious physician, and a man of sense; he will therefore pardon the freedom we take, in advising him, if he have any intention of again appearing as a medical author, to write in future for the profession. He will, in this way, be more likely to establish a permanent reputation, and in the end, do himself and the public more good, than by retailing small doses of medical knowledge to those who can scarcely be expected to appreciate or understand it.

J. W.

Observations on the Typhoid Fever of New-England. By ENOCH HALE, M.D.

THIS able paper, by one of the physicians of the Mass. General Hospital, is principally devoted to establishing the fact, that the common continued fever of New-England, is identical with the typhoid fever of Paris, as described by Louis. Peyer's glands were found affected in every case that was carefully examined, and the other lesions considered as more or less characteristic of this disease, were equally noticed. To us, the most interesting portion of Dr. Hale's labours is his examination of the pathological characters of the fevers of Great Britain. His conclusion is, that the fever described by Bright, Tweedie, Southwood Smith, &c., was, essentially, the typhoid fever described by Louis. But that within the last eight or nine years, a *new form* of fever has, also, prevailed in Great Britain, in which the affection of Peyer's glands is not a characteristic lesion, and which may differ also from the true typhoid fever in many other particulars. This agrees perfectly with the observations made in this city, during late years, at the New-York Hospital, and especially at the Bellevue Hospital, during the summer of 1837, when there were at times 200 fever cases in the wards, mostly emigrants just arrived from Great Britain. In conclusion, we are glad to observe, that Dr. Hale does not regard the condition of Peyer's glands in typhoid fever as *the disease*; an absurdity that has gained some credit in Europe, and we are afraid has affected some of our own observers.

J. A. S.

Animal Mechanism and Physiology; being a plain and familiar Exposition of the Structure and Functions of the Human System. Designed for the use of Schools and Families. By JOHN H. GRISCOM, M.D. Professor of Chemistry in the New-York College of Pharmacy, &c. (Illustrated by numerous wood cuts.) New-York, 1839. 18mo. pp. 357.

THIS little volume claims no special notice at our hands, being designed, as indicated by the title page, for the instruction of youth, and of such children of larger growth as may wish to know something of the structure and functions of their own body. So far as it goes, it is a plain and well digested compend; but as there are certain organs, the functions of which, it would be inexpedient to make children, whether young or old, acquainted with; our author, with becoming modesty, has left these organs and their functions altogether unnoticed.

J. W.

- I. *A Manual for Students preparing for Examination at Apothecary's Hall, or other Examinations.* By JOHN STEGGALL, M.D. Ninth Edition. London, 1838. 12mo. pp. 560.
- II. *A Manual for the College of Surgeons in London, Dublin, and Edinburgh, intended for the use of Candidates for Examination and Practitioners.* By JOHN STEGGALL, M.D., and M. W. HILLES. London, 1839. 12mo. pp. 772.

THE elementary works of Dr. Steggall, are highly spoken of by the medical press of London, and from a glance at the two works now before us, we have no hesitation in recommending them to the notice of our students and practitioners. In this country, however, neither of these volumes can be considered complete in itself; with us, the candidate for a license, or for a degree in medicine, should be prepared for the practice of his profession in all its branches. Even by taking these two manuals together, they are not sufficiently full on the subject of midwifery, and the practice of medicine proper; yet, so far as they go, they are excellent and well digested compends.

The manual for Apothecary's Hall, has gone through nine editions, a sufficient evidence of its value. It includes the regulations for examination at Apothecary's Hall. An epitome of pharmaceutical combinations and decompositions of chemistry, including organic and animal chemistry and toxicology, and of materia medica; with a very brief abstract of anatomy, physiology, the practice of medicine, and midwifery.

The manual for the College of Surgeons, is a more recent work, and much more elaborate than the preceding. It is divided into two parts; the first, occupying 446 pages, is devoted to anatomy, descriptive and surgical; the second portion of the volume is mostly taken up with surgery. The part devoted to surgical or regional anatomy, and to which we have more particularly directed our attention, presents a clear and sufficiently minute description of all the important parts of the body that may be involved in surgical operations, divested at the same time of the numerous repetitions and needless details that burthen and obscure some of the more important works on this subject.

J. W.

A New Dictionary of Medical Science. By ROBLEY DUNGLISSON, M.D. &c. Second Edition, with numerous modifications and additions. Philadelphia: Lea and Blanchard, 1839. 8vo. pp. 821.

THIS work of Dr. Dungliss, like the rest of his productions, gives evidence of much industry and learning. It is a book intended particularly for students.

SCIENTIFIC INTELLIGENCE.

Proceedings of the New-York Medical and Surgical Society. Regular Meeting, June 22.

Stricture of the Œsophagus. — *Dr. Green* read the history of the following case. — On the 18th of March last, I was called to see *Mrs. A.*, a lady of this city, aged 62, who had been for many months labouring under a stricture of the œsophagus. She had been, for some time previous, under the care of my friend, *Dr. Archelaus G. Smith*. The disease had existed nearly two years. At first she complained of a “burning sensation” in the throat, accompanied, at times, with some difficulty in swallowing. For a long time, however, this difficulty was slight; but for two or three months antecedent to the period of my first visit, the patient had only been able to swallow liquids, and those even in the smallest quantities. There was also existing, at this time, a small tumour, situated below the cornu of the os hyoides, on the left side, occupying the space between this bone and the thyroid cartilage. This tumour had existed for many weeks, but of late had been observed by the patient to have increased in size, and along with this enlargement there had been a correspondent increase in the difficulty of swallowing. At times, whole days would pass without the patient being able to swallow a particle of food, either in a solid or liquid state. The consequence was considerable emaciation of the body, but, with the exception of great debility, the general health did not appear to be much impaired.

This was her condition at the time I first saw her. *Dr. Smith* had succeeded, on several occasions, in passing a small bougie down the œsophagus, and in each instance this operation was followed with an ability to swallow a small amount of liquid food. At this time I passed, with some difficulty, a bougie, about four lines in diameter, and imme-

diately followed it with one two sizes larger. The patient, who had been unable to swallow for nearly twenty-four hours previous, soon after this swallowed some food, and was able to take nourishment, in small quantities, for the two succeeding days. At the end of this period, the largest bougie was again introduced, and this operation was repeated every second or third day during the two following weeks. By this time, not only had the inability to swallow increased, but it became exceedingly difficult to introduce the smallest of the bougies. The tumour which had been observed on the side of the œsophagus had, during this period, considerably enlarged, and had extended down to the cricoid cartilage. Suspecting that the pressure of this tumour upon the top of the œsophagus was operating as an additional hinderance to the passage of food and the bougie, I made an effort to raise it from its bed, by inserting my fingers under its base, and drawing it upwards and backwards towards the mastoid process. I succeeded, and whilst it was held in this position, the patient could swallow better than she had been able to do for several preceding days. Under these circumstances, I proposed to Dr. Smith, that we should remove the tumour. He acceded, and the patient herself desiring the operation, the tumour was carefully dissected out on the 22d of April. It proved to be what we had anticipated, a schirrous enlargement of one of the lymphatics. A reunion by the first intention followed this operation, and the patient was again able to take nourishment, in small quantities. A short time after this operation, another tumour made its appearance on the side of the œsophagus and trachea, about two inches below the cricoid cartilage. This tumour increased in size more rapidly than the first, and it was soon followed by an enlargement of several other of the lymphatics along the side of the neck. About this period, the patient lost all power of swallowing, and was in danger of dying from actual starvation.

On the 4th of June, we succeeded in passing through the stricture the smallest tube of Hutchinson's stomach pump, and immediately pumped into the stomach some liquid nourishment. From this time, until her death, we had no difficulty in administering, in a liquid form, by means of this invaluable instrument, all the nourishment that this suffering lady required. But, notwithstanding this, she gradually sunk under the influence of the disease. On the 7th of June, she was attacked with severe rigours, which were repeated on the 8th and 9th, and were attended with a diarrhœa, under which she sunk rapidly, and died on the 11th of the present month. A day or two previous to her death, the large tumour had considerably diminished in size, and she was able to swallow, with little difficulty, as long as she lived.

Autopsy. — Assisted by Drs. Smith and Cadwell, I examined the body fourteen hours after death. On making an incision along the side of the larynx and trachea, we found that the parts which had surrounded the removed gland had healed kindly, and were in a healthy condition. The whole chain of glands along the side of the neck were enlarged, and in a schirrous condition. On cutting into the large tumour, situated over the union of the clavicle and sternum, it was found to be in an ulcerated condition, containing a quantity of bloody serum. A part of its contents had evidently escaped into the surrounding parts, which had caused the decrease in the tumour's size. Its walls were bounded on one side by the trachea and œsophagus. The muscular coat of the latter, and also that of the jugular vein, were already destroyed by the ulcer. Had the patient lived, it must have made its way into the œsophagus in a very short time. A stricture, half an inch in length, was found in the upper part of the œsophagus, and on laying open this tube, its inner or mucous coat was much thickened, for several inches, below the orifice. The stricture itself was found to have arisen from a diseased state of the *muciperous glands*, situated at the upper part of the œsophageal tube. These glands were in a schirrous condition, and had so enlarged as nearly to obliterate the passage. The disease had, undoubtedly, originated in these glands; whilst the lymphatics, external to these, had become secondarily affected. Both orifices of the stomach, and the stomach itself, were in a healthy condition. The intestines were examined. In some portions of the smaller intestines, their coats were found to be preternaturally thin, and here and there, patches of inflammation of their mucous coats were found. The liver, the mesenteric glands, the uterus, and its appendages, were all in a healthy condition.

Dr. Cumming related a case of stricture of the œsophagus, in which tinct. iodine was given, and with much benefit; a bougie had been previously used, but without advantage. An adventitious membrane was brought up in scales soon after commencing the iodine. For two or three weeks the medicine was laid aside, but it was found necessary to resume it.

Dr. Blakeman read a paper on "uterine irritation," in some comments on which, *Dr. Cumming* expressed the opinion, that irritable states of the uterus may be often traced to a constipated condition of the intestines, and that remedies addressed to the latter will, most generally, be found more advantageous than when addressed directly to the former.

Regular Meeting, July 6. Present 18 Members. — *Dr. Green*

mentioned a case in obstetrics in which he had given ergot with speedy and happy results. The cord had been prolapsed about 12 hours and was without pulsation: — the organs of the mother and the head of the child were in due proportion, but the pains had ceased. The employment of instruments had been proposed, but the ergot was sufficient to expel the child. The opinion of the society being asked on this point, Dr. Beales observed that, as a general rule in such cases, he would prefer the operation of Embryotomy to ergot. Dr. Green mentioned that his usual practice was to give ergot in doses of gr. v. and in doubtful cases to combine about gr. ss. of opium with it, which he stated controlled the action of that medicine.

Dr. Joslin read some cases of fever, tending to confirm the opinion that crises, either partial or complete, occur on the critical days, viz: 1st, 3d, 5th, 7th, &c. after the attack, and with great regularity.

Dr. Dixon mentioned a case of laceration of the perinæum and vagina by a trowel, in which he had used Dr. Bushe's needles for the sutures with success.

He also related an instance of injury to the shoulder-joint, in which he diagnosed a longitudinal fracture of the humerus near its head, the upper fragment retaining its place, and the head of the lower portion making for itself an articulating surface in the axilla, against the ribs. Motion was nearly perfect in most directions.

Infantile Pneumonia, ending in Suppuration.—*Dr. Swett* related a case of pneumonia in an infant, which had occurred to Dr. Buel. The child, 10 months old, of a healthy constitution, was attacked on the 9th of June, (having had the measles six weeks before, but perfectly recovered) with vomiting, drowsiness, fever, &c. Dr. B. saw it on the 12th. At that time it lay with its eyes closed, its countenance pallid; pulse 160; skin cool and moist; tongue covered with a dirty white coat; very little cough; the nature or severity of the attack was not suspected by the parents. The lower and posterior portion of the right lung sounded decidedly flat; there was increased resonance of voice; and occasionally a crepitating rattle. Six leeches were applied to the right side, and castor oil ordered. The leeches bled profusely, but the child was not relieved. Spirit of Mindererus ʒii. ; syrup ipecac ʒi. ss. mix a tea spoonful every two hours, with calomel, one grain every 2 hours; still no improvement. On the 14th, 4 more leeches were applied to the right side, and the syrup of ipecac, &c. in nauseating doses continued.

On the 18th a small blister was applied to the right side; the calomel and nauseating doses of ipecac were continued, but without improvement.

On the 19th more arterial excitement; 4 leeches to chest; a consid-

erable amelioration of the symptoms followed their application; countenance brighter; less stupor. This apparent improvement continued until the 23d, when convulsions ensued, and the child died at 11 P.M.

On *post-mortem* examination, 12 hours after death, some trifling recent adhesions were found in the right pleural cavity, but no serum. The upper and middle lobes of the right lung presented, externally, a pale straw colour slightly tinged with pink; when pressed between the fingers they did not crepitate at all, but felt uniformly and remarkably firm; when cut, the surface was dry and granulated, some lobules being more distinct than others. When pressed between the fingers, no fluid exuded, but only a little mucus from the cut bronchi. On pushing the end of the finger into the substance of the lung it penetrated with considerable ease though with less facility than in the hepatization of adults, and especially in such cases where suppuration is commencing; the cavity thus formed, presented distinct granulations, and became filled with a thin unaërated purulent fluid. The lower lobe of the same lung was of a pale violet colour, still crepitating on pressure, and discharging a good deal of redish frothy serum; tearing more easily than natural, and presenting, at its very base, a few lobules in the state of hepatization. In the upper lobe, the principal seat of disease, a few circumscribed spots of purulent matter were noticed which were probably contained in the dilated bronchi; also some spots, more yellow than the surrounding portions, assuming the shape of the lobules dry, consistent and granulated, probably pus in a concrete form. The left lung was slightly congested at its lower portion, but otherwise healthy. The bronchi, even those passing into the inflamed lung, were perfectly healthy, as also the larynx and trachea. The other organs were not examined. Dr. S. remarked that this appeared to him a case of suppuration of the lung, a form of disease usually regarded as of very rare occurrence in children of this age.

Case of Wound of the Abdomen, followed by Strangulated Ventral Hernia. Dr. A. C. Post read the following case. — On the 29th June, 1839, I was present at the New-York Hospital at the examination of the body of a woman, aged 41 years, who had been wounded with a knife in the abdomen four days before. The wound was inflicted by her husband, who was said to be intoxicated. The incision through the integuments was between 8 and 9 inches in length, extending from a point about half an inch on the right side of the median line, and about 2 inches above the vulva, to a point about three inches to the right of the umbilicus, and a little above it. The patient was seen by a surgeon soon after the injury was inflicted. The urinary bladder was found to have

been opened near its fundus to the extent of $1\frac{1}{2}$ to 2 inches. The edges of the wound in the bladder were brought together by means of two sutures. The peritoneal cavity was also opened to the extent of several inches and a portion of the intestines protruded through the opening. The surgeon, who was called, closed the wound by sutures passed through the integuments, and by adhesive plasters. The patient was sent to the hospital on the following morning, and came under the treatment of Dr. J. Kearny Rodgers. She appeared much prostrated, with a feeble pulse, and a somewhat anxious countenance. There was not much pain or tenderness of the abdomen at the time of her admission, nor at any subsequent period. A catheter was introduced into the bladder and allowed to remain there. Enemata were administered, but no free evacuations from the bowels were obtained. Warm anodyne fomentations were applied to the abdomen. The patient vomited frequently, and brought up considerable quantities of a yellowish fluid having the appearance and odour of the imperfectly formed feculent matter which is found in the small intestines. She gradually became more feeble, and died on the morning of the 29th, about four days after the injury.

Autopsy at 5 P.M. External wound as before described. On removing the adhesive plasters, an elongated oval tumour was seen beneath the integuments, extending about two inches on each side of the wound. The opening into the peritoneal cavity, was not so extensive as the wound of the integuments. There were three distinct incisions through the abdominal muscles and the peritoneum, the lowest being about 3 inches in length, the uppermost about $2\frac{1}{2}$ inches, and the middle one about an inch and a quarter. These openings were separated from each other by 2 narrow bands consisting of portions of the aponeuroses, which had not been divided. A long portion of the small intestines protruded through these openings, and was situated immediately beneath the integuments constituting the tumour before alluded to. This portion of intestine appeared somewhat congested, and was of a deeper colour than in its normal condition, but not very much reddened. A small knuckle of intestine, about 3 inches in length, had passed through the smallest opening, and was closely embraced by one of the aponeurotic bands, which have been mentioned, so that it appeared as if it had been tightly included in a ligature. This strangulated portion was of a brownish red colour, like that of chocolate. The colour was more intense on the mucous than on the peritoneal surface. The strangulation of this portion of intestine was regarded by those who were present as the immediate cause of death. The intestine above the stricture and the stomach were distended with a yellow fluid, resembling that which

had been vomited. The wound in the bladder was below the reflexion of the peritoneum, which passes over its fundus. Two fibrous tumours were found connected with the upper part of the uterus, one about three inches in diameter, the other about half an inch.

It is not improbable that the fatal result might have been prevented in this case by the division of the bridles which occasioned the strangulation of the bowel, if their existence had been detected. This protrusion of the intestines might also have been prevented by passing the sutures through the whole thickness of the abdominal parietes, instead of confining them to the integuments.

Aneurism of one of the Mitral Valves — Vegetations of Semilunar Valves of Aorta. DR. POST also read the following case.

June 26th, 1839. At the New-York Hospital, an examination was made to-day of the body of a man who had, during the last four months, been affected with hemiplegia of the left side. The paralytic affection had been improving for some time before the patient's death. The day before his death he was suddenly seized with nausea without any apparent cause, and from that time he began to sink.

On examination after death, a large cyst of a somewhat irregular form, and about 3 inches in diameter, containing 2 ounces of sero-purulent fluid, was found towards the posterior part of the right hemisphere of the cerebrum, and near its upper surface; it was lined by a very distinct membrane. The heart was very much enlarged, being at least double its usual size. The enlargement was chiefly in the left ventricle. The semilunar valves of the aorta were covered with a thick mass of soft vegetations. One of the mitral valves presented a distinct aneurismal sac, of the size of a very small cherry, projecting into the auricle, and communicating with the ventricle by an aperture about a quarter of an inch in diameter: there was also a minute orifice at the most prominent part of the sac, opening into the auricle. The sac was occupied by a fibrinous clot.

Purpura Hemorrhagica. — DR. C. WRIGHT related the following case of Purpura Hemorrhagica, which was successfully treated by calomel and quinine:

On the 3d of May last, I was called to see Ed. Roach, aged 4 years, a smart active lad, generally enjoying good health. For the past week or ten days, his appetite had failed him, and he had been languid: no other change was observed in him until within a few days, when purple and red blotches began to make their appearance on various parts of the body. They supposed them to be the bites of insects at first, until the appearance of blood created alarm. I found him in the following

condition : complexion yellow ; general appearance that of one who has been beaten and much bruised. On his arms, face, and trunk, were several livid oblong blotches from two to four inches in circumference. Some of them were elevated nearly the fourth of an inch, and all have the appearance of ecchymoses. Petechiæ and vibices, varying in size from a minute point to that of a shilling piece, were scattered over the surface generally, but were most numerous on the neck, chest, and arms. The petechial spots were of various colours ; red, purple, yellow, and brown. Similar spots occupied the mouth and fauces, from which, as well as from the nose, was constantly oozing black venous blood. There was also hemorrhage in different places around the neck and trunk, and from the inner canthus of the left eye. A slight blow on the skin produced a dark spot. The bowels were relaxed ; feces dark and interspersed with grumous blood, and very offensive. The temperature of the skin was natural ; pulse quick, soft, and easily compressible. Complained of no pain, but slight headache — was able to go about the house, but moderate exercise induced great fatigue.

It appeared to me that the hemorrhage was of a passive kind, and that the natural secretions, influenced by the general relaxation, were mostly suspended. Hence I gave a small dose of rhubarb and calomel, to be followed by calomel and quinine.

During the day he took every 2d hour, a pill composed of calomel gr. $\frac{1}{2}$, quinine grs. ss. At the end of the week the only perceptible amendment was the alvine evacuations, which had become less frequent and more natural. The medicine was continued for three weeks with improvement of the general health, and some alterations in the disease. He was now directed to go into the open air, and to have nourishing food. The blotches gradually disappeared in the course of a month after the restoration of his general health.

Dr. Beales related a case of slight injury of the cornea resulting rapidly in extensive inflammation, iritis and effusion of lymph into the anterior chamber : this occurred in one day. Mercurial treatment was instituted internally and by inunction, and in 24 hours the lymph was absorbed ; then conjunctivitis supervened, which yielded readily to antiphlogistics.

Dr. Buck related a case of congenital deformity in a man over 25 years old, consisting in eversion of the bladder. A tumour existed above the pubis, which almost disappeared when the subject was recumbent. The penis was imperfect ; there was a constant dribbling of water from the orifices of the ureters, and an evident excavation in the parietes of the abdomen. Drs. Beales and Wright alluded to similar cases.

Dr. Casey read a paper on the use of Iodide of Potassium, with cases illustrating its effects.

On motion of *Dr. Post*, the Society then adjourned until the first Saturday in September.

Regular Meeting, Sept. 7th. Present 18 members. *Dr. Post* exhibited a specimen of abdominal and uterine disease; and *Dr. Watson* a specimen of granular testis in the first degree. The Quarterly Essay, due at the adjournment of the Society in July last, was then read by the President; subject, "Syphilis in Infants."

Dr. Watson read an account of a "Dislocation of the Patella on its Axis," with remarks on the same.

Dr. Post mentioned the case of a man who had fallen from a scaffold, and who died shortly after he was brought to the hospital. On examination there was found emphysema of the right side of the body; fracture of four ribs of the same side; laceration of the right lung in several places; the gall-bladder was detached and distended with blood; blood was effused between the peritoneal and muscular coat of the stomach, and down the right side of the abdomen.

Aneurism of the Aorta. Effusion into the Pericardium. Sudden death. *Dr. Swett* related the case of a drunken prostitute, æt. 24 years, who after going up stairs, fell down and died in 5 minutes.

On examination, the pericardium was found to contain 6 ounces of serum, and a considerable clot of blood. There was a true aneurism of the aorta springing just below the innominate, and communicating with the vessel by a round opening an inch in diameter: the aneurism was about the size of a common Sicily orange; the line of communication from the vessel to the aneurism was to the right and downward; but the great mass of the tumour was anterior, just under the sternum. The internal coat of the artery could be traced distinctly into the cavity of the aneurism, but the middle coat appeared to stop suddenly at the orifice, forming a smooth elevated ring. At that portion of the cavity of the aneurism opposite the orifice, there was a laceration of the internal coat for an inch, and a corresponding one of from 3 to 6 lines, of the pericardium reflected over the commencement of the aorta, and there forming its external coat. There were coagula, old and recent, one quarter of an inch thick in the cavity of the aneurism, lining most of its internal surface, except for a considerable space around the laceration. The internal coat of the aorta was thickened, and contained a few atheromatous patches, especially about the orifice of the aneurism.

Dr. S. remarked that this case presented an instance of one of the

causes of sudden death, and so far as his experience had gone, of the most frequent cause, although this was contrary to the opinion of some of the best pathologists. It also proved that aneurisms, springing from the commencement of the aorta, might attain a very considerable size, although this also was disputed by some, before rupture into the pericardium, its ordinary termination, took place.

Operation for Spermatocoele, by SIR ASTLEY COOPER. This surgeon, in his work on the Testis, published in 1830, makes the following remark: "The removal of a portion of the scrotum will lead to a diminution of the veins of the spermatic cord; and it is an operation, in an extreme enlargement accompanied with pain, which might be tried with perfect safety, and is very likely to succeed." Since this period the proposed operation has been performed a number of times, and with success. "The mode of performing the operation is as follows: The patient being placed in a recumbent posture, the relaxed scrotum is drawn between the fingers; the testis is to be raised to the external ring by an assistant; and then the portion of the scrotum is removed by the knife or knife-scissors; but I prefer the former. Any artery of the scrotum which bleeds should be tied; and a suture is then made, to bring the edges of the diminished scrotum together. The patient should be kept for a few hours in a recumbent posture, to prevent any tendency to bleeding; and then a suspensory bag is to be applied, to press the testis upwards, and to glue the scrotum to the surface. The only difficulty, in the operation of removing the scrotum by excision, is in ascertaining the proper quantity to be removed; but it adds but little to the pain if a second portion be taken away, if the first does not make sufficient pressure on the spermatic cord. It is of no use to remove a small portion of the scrotum, for from doing this I have failed. * When the wound has healed, the varicocele has lessened, but not always entirely removed; but the pain and distressing sensations cease, if sufficient of the scrotum be removed. In making the suture in the scrotum, its lower part is to be brought up towards the abdominal ring, to raise and support the testis, as does the suspensory sling when it is worn. I wish it to be recollected, that I only recommend the removal of a portion of the scrotum in those cases of spermatocoele in which the patient suffers great local pain; in cases in which he is most urgent to have the swelling and deformity of the part removed; and more especially, in those instances in which the function of the digestion suffers, and there is a great degree of nervousness and of mental

depression. In slighter cases, a suspensory bandage must be still recommended."

Guy's Hospital Reports.

Extirpation of the Womb by Ligature. — Ann Jones, æt. 27, a female of strong habit of body, was on the 17th of March, 1838, delivered by a midwife, who in extracting the placenta, inverted the womb. The reporter and another surgeon were in attendance on the second day. At this time there was a large globular tumour, of about the size of a child's head lying in the vagina, which was so firm and hard that it did not yield in the least to pressure; besides every attempt at reduction was attended with such severe pain that they were obliged to desist. Several months passed on, during which her health suffered severely from hemorrhages, which at first were periodical, being more severe at monthly intervals, and afterwards she was scarcely free from them. Various astringent injections and other means were tried, but without much benefit. On the 10th of Nov. the reporter again saw her, and found her very much reduced: her face pale; her lips bloodless; her ankles slightly swollen, and syncope occurring whenever she assumed the erect or semi-erect posture. As there was no chance of saving her life except by extirpating the womb, an operation was advised, to which she consented. A ligature, by means of a double canula, was applied around the neck of the uterus, which was, at this time, of the normal size. Immediately on tightening the ligature, she did not complain of pain; but in about ten minutes after, the pain became so excessive that we were obliged to slacken it, nor could she bear any but the slightest pressure for a fortnight afterwards. The ligature was then gradually tightened for about three weeks, when it separated. The patient gradually regained her strength, and was restored to perfect health.

Lancet.

Treatment of Lateral Deviation of the Spine by division of the Muscles of the Back. — M. Jules Guerin has lately stated to the Academy of Sciences that he had operated twelve times successfully on patients affected with lateral deviation of the spine, by dividing the muscles of the back and spinal column: he has thus far divided the trapezius, rhomboideus, levator scapulæ, sacro-lumbalis, longissimus, dorsi and inter-transverse muscles.

"I have demonstrated the truth of the two following propositions:

1st. The majority of lateral deviations of the spine depend on active muscular retraction, and their anatomical varieties are but the expression of this retraction occurring, in various degrees, in the muscles of the spine and back."

2d. "The active treatment of this order of deformities should consist in dividing, under the skin, the several retracted muscles."

"The operations which confirm my theory were performed on individuals of both sexes, and of different ages; the youngest being 13, the oldest 22 years of age. The deviations had all arrived at the second or third degree with distortion of the spine, and proportionate gibbosity. In some cases a single section of the retracted muscles effected a cure; in others I was compelled to operate two or three times. In all cases I obtained immediately after the operation a well-marked degree of straightening of the spinal column; and in one case, that of a young man, 21 years of age, who had been treated mechanically for the last 18 months, the deviation *immediately* disappeared after the division of the longissimus dorsi, and the corresponding inter-transverse muscles. In all the other cases, I was enabled to complete the cure by mechanical means. In the 12 cases, no accident of any kind occurred."

Artificial Anus. — At a late meeting of the Academy of Medicine, Paris, the following case was communicated by M. Amussat:

A lady, 48 years old, had long suffered from constipation, severe pain on going to stool, and hemorrhage from the rectum; the bowels were open only once every seven or eight days. In the commencement of May last, she was treated by M. Amussat, for a slight affection of the uterus, and was about leaving for the country, when she was seized with obstinate constipation. Every remedy was now employed, but without effect. On examination of the rectum, no obstruction, no trace of fecal matter could be found. M. M. Breschet and Recamier were called in consultation, and it was at length determined to operate, the patient being almost reduced to the last extremity. Callisen's mode of establishing an artificial anus as modified by M. Amussat, was performed on the 2d of June, in the following manner: The patient having been placed upon her abdomen, and the trunk elevated on pillows, a transverse incision was made two inches above the *crista ili*, and over the prominence which was evidently produced by the left lumbar colon. This incision extended from the common body of the *sacro-lumbalis* and *longissimus dorsi* muscles to the middle of the *crista ili*. The superficial

fascia, the dorsal and external oblique muscles were next divided in the same direction, layer by layer; the internal oblique and transverse were then divided, and by crucial incisions. A small arterial branch was twisted, and a layer of fascia divided by a crucial incision. This last exposed the fatty cellular tissue which lies immediately in contact with the intestines: it was removed by means of curved scissors, and two ligatures were passed through the walls of the intestines in order to keep it *in situ*, and to prevent its retraction. The colon was recognised, to a certain extent, without its peritoneal coat, and a trochar introduced into its most prominent part; on withdrawing it, a quantity of gas and liquid fœces escaped. The patient was immediately much relieved. A bistoury was now passed along the canula, and the opening of the intestine freely enlarged in different directions. An abundance of gas and fœces escaped; and injections being thrown into the superior and inferior portions of the colon, three basins-full of liquid fœces came away. The orifice of the intestine was attached to the anterior angle of the wound by four sutures. The success of the operation was complete. Sixteen days afterward, the patient was in excellent health; she has resumed her usual occupation; the fœces are discharged two or three times in the twenty-four hours.

Treatment of Vesico-vaginal Fistula. —[Dr. Hayward of Boston, has published in the American Journal of Medical Sciences, for August, a successful operation for Vesico-vaginal Fistula, of fifteen years standing. The following extract presents all the important particulars of the case:]

Upon examination, I found the fistula situated from an inch and a quarter to an inch and a third behind the urethra, a little on the left side. It was not large, barely sufficient to admit the end of my forefinger, and surrounded by a hardened edge, nearly of the consistence of cartilage. There was some degree of morbid sensibility in the lining membrane of the vagina, so that an examination was quite painful.

I told her that an operation for the difficulty had been several times successful; that it had more frequently failed, and that in a few instances it had been followed by very serious consequences. At the same time, I regarded her case on the whole as a favourable one, and if, after this explanation, she wished for an operation, I would cheerfully undertake it. She at once consented, and it was fixed for the next day but one, May 10th, 1839, when it was performed in the following manner, in the presence of my friends Drs. Channing, C. G. Putnam, and J. B. S. Jackson.

The patient was placed on the edge of a table, in the same position as in the operation for lithotomy. The parts being well dilated, I introduced a large bougie into the urethra and carried it back as far as the fistula. In this way I was able to bring the bladder downwards and forwards, so that the opening was brought fairly into view. The bougie being then taken by an assistant, I made a rapid incision with a scalpel around the fistula about a line from its edges, and then removed the whole circumference of the orifice. As soon as the bleeding, which was slight, had ceased, I dissected up the membrane of the vagina from the bladder all around the opening, to the extent of about three lines. This was done partly with the view of increasing the chance of union, by presenting a larger surface, and partly to prevent the necessity of carrying the needles through the bladder. I then introduced a needle, about a third of an inch from the edge of the wound, through the membrane of the vagina and the cellular membrane beneath, and brought it out at the opposite side at about an equal distance. Before the needle was drawn through, a second and a third were introduced in the same way, and these being found sufficient to close the orifice, they were carried through, and the threads tightly tied. Each thread was left about three inches in length. I should have remarked, that I found no difficulty in introducing the needles by the hand, the fistulous opening having been brought so low down and so fairly in view.

A short silver catheter, constructed for the purpose, was then introduced into the bladder, and the patient was conveyed to the bed, and laid on her right side, to prevent any urine from coming in contact with the wound. I found her in the evening, eight hours after the operation, quite comfortable. She had had some smarting for two or three hours; but this was soon gone; she complained a little of the catheter; all the water flowed through it and was received upon cloths. She was directed to live on thin arrow root, milk and water, and a solution of gum arabic.

In the morning I removed the catheter, lest it might become obstructed, and after cleansing replaced it. No water had escaped through the wound. The patient had slept some in the night; her pain had been slight, and all her sufferings she referred to the instrument. Her pulse was good, and she had no febrile symptoms. She was directed to keep in the same position, to live on the same diet, and take a solution of salts early the next morning. She went on perfectly well for five days, the catheter being removed daily. At this time I examined her by means of a speculum. I found that the stitches were quite firm and that the wound had apparently healed in its whole extent. There was no oozing of water through it, though she was then lying on her back,

and there was urine in the bladder, as it flowed through the catheter as soon as I introduced it. I then cut away the stitches, which I found by no means easy, as I was afraid to bring down the bladder, as was done in the operation, lest the wound might be torn open. The stitches, however, were at length safely removed, and in doing this, I was much indebted to the assistance of my friend Dr. Putnam.

A smaller catheter was now introduced, and the patient put to bed in the same position as before. She continued very comfortable for two days, much more so than she had been at any time before, which she attributed to the size of the instrument. I then removed the catheter altogether, and directed her to introduce it every three hours, so as to prevent any accumulation of urine. This she did till the second night, when she slept quietly for seven hours, and on waking felt no inconvenience. Twice also, during this period, she passed water by the efforts of the bladder alone, so that the organ had already regained, in part, its expulsive power, as well as that of retention. She now set up, introduced the instrument less frequently, and was allowed a more generous diet.

At the end of seventeen days from the operation, I examined her again; the wound was entirely healed and apparently firm, and the soreness nearly gone. I advised her to introduce the catheter two or three times a day for some weeks; and on the following day she returned home by water, a distance of nearly two hundred miles."

[The plan of raising the lining membrane of the vagina, from the walls of the bladder, upon which Dr. Hayward appears to have proceeded successfully, in this case, is worthy of the consideration of those who may hereafter attempt the radical cure of this troublesome affection. The various operations hitherto suggested for this purpose, have been attended with very inadequate success. We have several times seen them fail in the hand of the most skilful operators, both in this city and elsewhere. So trifling, indeed, has been the success of these operations, that some surgeons are, at present, rather disposed to leave the patients to themselves, rather than resort either to the cautery or the suture. The writer of this note has met with two cases of vesico-vaginal fistula, which, after existing two or three years, at length contracted so as to enable the patients to retain their urine for several hours together. And on mentioning these facts to Dr. A. H. Stevens, this experienced surgeon corroborated them by a similar instance that had occurred under his own observation.]

Wounds of the Head. — M. Laugier, some time since, communicated to the Academy of Sciences, Paris, an account of a new sign of effusion

of blood within the cavity of the cranium, accompanied by a fracture of the petrous portion of the temporal bone, penetrating into the cavity of the tympanum. This sign consists in a discharge, from the ear, of a more or less considerable quantity of a watery fluid, at first slightly tinged with blood, but soon becoming limpid, which is nothing else than the serous portion of the blood that has been effused into the cavity of the cranium, between the dura mater and the bone.

Lesion of the Trunk of the Ganglionic System of Nerves in the Neck, and its effect upon the Eye. — Dr. John Reid has recently shown, by a series of experiments, (Edinburgh Med. and Surg. Journal for July, 1839,) that, by injuring the sympathetic nerve in the neck, the pupil of the eye, on the corresponding side, becomes contracted, and the eyelids partially closed, independent of the conjunctival inflammation which is known to follow injury of this nerve. "I have frequently verified," says he, "the observations of Petit and others, that when the *vagus* is injured in the neck in those animals in which the sympathetic is confined with the *vagus*, as in the dog, that the conjunctiva becomes inflamed, the pupil contracts, and the eyelids are somewhat more closely approximated to each other." At first, he was inclined to believe that the state of the pupil and eyelids depended upon the impatience of light which sometimes accompanies inflammation of the conjunctiva. But, after attending more carefully to the subject, he has ascertained "that the contraction of the pupil, the projection of the cartilaginous membrane, or third eyelid situated at the inner angle of the eye, over the cornea, and the partial approximation of the eyelids to each other, take place immediately after the injury of the sympathetic, and before the inflammation of the conjunctiva presents itself, and that they continue after it has disappeared."

Successful Operation for the Purpose of remedying a Deformity of the Leg; consequent to a badly set Fracture. By CHARLES PARRY, M.D. of Indianapolis, Indiana.

THE patient upon whom this operation was performed, was a young man near the age of 22; a member of the bar, of fine talents, and considerable attainments.

The history of the case is as follows: — At the age of fifteen, while skating on the ice, he fell and broke his right leg; the tibia about midway, the fibula two inches lower down. The physician, who was called

to attend the case, was considered skillful, but of intemperate habits, and, most unfortunately for the patient, was intoxicated at this time.

In what manner he dressed the fractured limb, it is impossible to say ; but in the course of three or four weeks, it was found quite firmly united : the bones forming an angle almost equal to a right angle, at the place of fracture. The patient had to walk with a crutch, the toes of the lame limb not touching the ground when he was in the erect position. When he sat on a chair, and placed both feet on the floor, the knee of the sound limb was five inches higher than the knee of the lame one.

After some deliberation, I stated that I thought he could be very materially benefited by the following operation :

To cut down to the bones ; dissect the muscles from them, and saw a little block out of the angle of each bone ; bring the lower end of the limb in a line with the upper ; retain them in juxtaposition by splints ; and treat as a compound fracture.

On the 15th of January, 1838, assisted by Drs. Mason and Ford, others present, I proceeded to the operation already described. I had prepared myself with a small saw, from the plate and description of Dr. Barton's in his hip-joint case, without which I would have found great difficulty in sawing the fibula ; from its being so closely and firmly fixed against the outward flat surface of the tibia, and covered by the tibialis anticus muscle. Further, without this small saw, it would have been difficult to avoid wounding the anterior tibial artery ; for, while severing the fibula, I had to introduce the end of a finger between the artery and bone, and permit the saw to strike against my finger.

In sawing the fibula, I had made my calculations for the two sections to meet at the posterior part of the bone ; but after the block of bone was taken out, I found the leg would not yield to moderate force. I then took off another section from the lower end, the appearance of which indicated that, at the original fracture, a very thick spicula of bone had extended across the angle, acting as a brace ; the triangular space being filled up by osseous deposition. After this was overcome, the limb was brought straight without further difficulty.

By this operation, the leg was increased three inches in length.

[Dr. P. does not inform us in what manner the limb was subsequently secured. Nothing untoward followed the operation until the thirteenth day ; when the coapted bones were accidentally disturbed, and the healing process consequently prolonged for several weeks. Towards the latter part of March, however, the patient had so far recovered as to set out upon a journey through Wisconsin Territory, to examine the country.

Dr. Parry in the preceding case, which we have abridged from the

Amer. Jour. Med. Sciences, for August last, has evinced considerable ingenuity in successfully following up the precedents of J. R. Barton, Wasserfuhr,* and others, in their operations on the continuity of bones for the removal of deformities. At the time of this operation, Dr. P. was unaware of any other similar cases, excepting that of Dr. Barton, in the neck of the femur. In the same number of the Amer. Journal of Med. Sciences, is an abstract of several others, that have recently been performed in Europe.]

On Perforations of the Stomach from Poisoning and Disease. By A. S. Taylor. — Poisons are capable of inducing perforation of the stomach in two ways: 1. by corrosion; 2. by leading to ulceration, and the destruction of the parietes in a circumscribed space by that process. Some poisons have a powerfully corrosive, or destructive action, on the living fibre. Such is the case with the concentrated mineral acids and alkalies, corrosive sublimate, nitrate of silver, and a few others. The action of these poisons, in corroding the living organs, is purely chemical, and takes place immediately on contact. During life, the action of the corrosives is known by the symptoms *immediately* following the injection of the poison; and after death, if this have taken place speedily — which is commonly the case when the poison is swallowed in a large dose, or in a highly concentrated state, — by the distinct traces of their chemical action on the mouth, fauces, œsophagus, and stomach. Other poisons appear to have a purely irritant action, giving rise to inflammation and its consequences: they do not chemically corrode or destroy the part with which they come in contact. This description applies to arsenic, and the salts of barytes, among the more common poisons; but all the corrosives, when taken in a diluted form, are capable of acting as irritants. In estimating the action of poisons on the stomach, we must then consider whether the substance taken be of a corrosive or irritant nature.

The *perforation by corrosion* is the most common variety of perforation from poisoning; and, as its name implies, it is a simple result of the chemical action of one of the corrosive poisons on the stomach. Among these, the mineral acids are commonly taken or administered; and of the mineral acids, we might point to the sulphuric, as furnishing us with the most frequent examples of this kind of lesion. Perforation, in this form of poisoning, is not unusual when it has been swallowed in a concentrated state; if taken diluted, or if, at the time, the stomach be filled with food, then the parietes may escape destruction.

* See Malgaigne, Manuel de Médecine Opératoire.

The characters of the aperture are these: it is generally large and wide, occupying sometimes a considerable extent of the organ. The mucous membrane around, is of a dark brown or black colour, having, for a considerable space, a sooty appearance. This black matter, which results from altered blood, as well as from the carbonizing action of the acid on the mucous membrane, is often disposed in insulated or striated patches, taking the course of the rugæ. On removing this, if life has been sufficiently prolonged, marks of inflammation may be found beneath; but this is by no means constant. The edges of the aperture are rough, irregular, and often softened and pulpy. The action of the acid will be found to extend through the œsophagus into the fauces, and as a portion generally escapes from the stomach through the opening, the adjacent organs are frequently affected by its corrosive action. The perforation is produced either immediately, or very soon after the ingestion of the acid, and death is commonly a very speedy consequence. The acid may be, in general, easily detected, either in the contents of the organ, or, if these have escaped, in the liquid effused in the abdomen or pelvis. If no liquid can be discovered, a small portion of the corroded mucous membrane, digested in water, will yield traces of its presence.

Nitric acid is capable of perforating the stomach, like the sulphuric; but it is a poison not often taken, and therefore we cannot speak as to the frequency of perforation by it in the human subject. Among the cases collected by Orfila, there is only one in which perforation was observed. The aperture in the case of nitric acid presents all the marks of corrosion; and the edge is generally tinged of a yellow colour; or if bile be present in the contents of the stomach, then the mucous coat may have a greenish hue.

Comparatively speaking, corrosive sublimate is not often taken as a poison; but when introduced into the stomach, it is liable to perforate the organ by corroding its parietes to a greater or less extent. This accident is, however, rare; and is only likely to be witnessed when the poison has been taken in a very large and concentrated dose.

We have next to speak of perforation from ulceration, caused by irritant poisons. This may be regarded as an extremely rare variety. Those substances which destroy the stomach by corrosion are capable, when diluted, or taken in less concentrated doses, of giving rise to ulceration of the coats; the eschars first formed, sloughing off. Of all the irritants, — and, indeed, it may be said of all poisons, — arsenic is the most frequently taken. Notwithstanding this, cases in which it has produced ulceration, are not common; and those in which the ulceration has pro-

ceeded so far as to perforate the coats, are very rare. Death usually takes place long before the process has advanced to this degree.

Perforation from Morbid Causes. — Perforation of the stomach may be a result: 1. Of simple ulceration; sometimes of an acute, but more commonly of a chronic character; 2. of scirrhus ulceration; 3. of a solution of the parietes, which is supposed to take place after death.

Ulceration of the stomach, proceeding to perforation, is one of the most formidable and insidious diseases. It often attacks persons, more especially females, in the prime of life, and in the full vigour of health; and previous to the sudden and fatal illness, there will be no warning of the impending danger. In general, the previous symptoms are only those of dyspepsia, or ordinary derangement of the stomach: the illness is so slight as not commonly to attract the notice of those with whom the person is living.

1. On opening the abdomen, there are all the marks of severe peritonitis; effusion of serum, with coagulable lymph; agglutination of the viscera; and extravasation of the contents of the stomach.

2. An aperture in the stomach, of an oval or rounded form; its shape depending, in some degree, on the manner in which the parietes of the stomach are placed to observe it. It is commonly from half an inch to an inch in diameter; and is situated in or near the lesser curvature, between the cardia and pylorus. This almost constant situation of the ulcerated aperture is a circumstance worthy of remark. It has not, as yet, so far as I am aware, received any explanation from pathologists. The edges of the aperture are smooth, soft, and fleshy-looking. The tunics appear to be thinned off, from within outwards; so that the mucous membrane is usually removed to a greater extent than the muscular coat; and this, than the peritoneal coat. The last is thinned off to a sharp edge, so that there is no appearance of laceration or ulceration. Near the circumference of the aperture, the coats of the stomach are thickened, sometimes hard, and even cartilaginous. This thickening may be disposed in a slight ring, or extend to some distance; and it may be confined to one part of the circumference, or extend all round. I have here described what I have actually seen.

When the aperture is the result of simple ulceration, then the appearances will be modified, — there is no thickening of the coats of the stomach, and marks of ulceration are apparent. The edge of the aperture may be very slightly, or not at all, raised above the surface of the surrounding membrane.

3. The mucous membrane of the stomach is either pale or presents slight patches of inflammatory redness; sometimes only the margin of the ulcerated aperture is slightly reddened.

Perforation by Solution. — This kind of perforation is often called spontaneous ; because, formerly it was thought that, with this exception, all apertures in the organ resulted from the action of corrosive substances. But the perforation by simple or schirrous ulceration might with equal reason be called spontaneous. Chaussier, and other French writers, class under the head of “spontaneous,” all that are not produced by poison. There is considerable doubt among pathologists, as to the circumstances under which, and the time at which, this kind of perforation takes place. Some regard it as the result of disease in the parietes of the stomach, analogous to softening in other organs, and consider that the aperture is formed during life ; others, on the contrary, believe that it is a simple *post-mortem* change, resulting from the action of the gastric secretions on the coats of the stomach after death. The latter is the view more generally adopted by English pathologists ; a circumstance which has induced me to give to this the name of “perforation by solution.” There are, it appears to me, difficulties to the admission of either view exclusively ; but, before noticing these, it will be perhaps better to state the characters of the aperture, and the means by which we may distinguish it from the perforation by poison.

This kind of perforation is generally met with at the greater extremity of the stomach, occupying sometimes a large portion of the fundus. It is large and irregular ; the edges are thin, ragged, commonly much softened for a considerable space around, and present that fringed appearance which the stomach might be conceived to acquire by the scraping of its parietes with a blunt knife. The mucous membrane around the aperture is stated to have sometimes a black or brown colour ; and the blood in the vessels, ramifying on the coats, is similarly changed. The mucous membrane of the whole stomach is pale and free from vascularity. Indeed Dr. Carswell, who adopts the view of chemical solution, asserts “that redness, whether arising from the effusion of blood, or vascularity, is incompatible with perforation from this natural chemical agent.” It is clear, that if it be a *post-mortem* change only, it cannot be accompanied with vascularity, or that the vascularity, if it exist, must be incidental, and depending on some other cause. The contents of the stomach are not always effused ; and when they are, there is no evidence of peritoneal inflammation, nor any morbid change whatever, to indicate that the effusion had taken place during life. The absence of all marks of peritonitis seems to indicate, in the most positive manner either that the perforation and extravasation occurred recently before, or at some period after death. The viscera opposite the perforated spot, whether the spleen, liver, or diaphragm, are commonly found softened,

and in a dissolved state; having almost the impress of having been acted on by some fluid which has escaped from the stomach. Lastly, this singular change is either not indicated by symptoms during life, or they are of so light a kind, as to lead us to no suspicion of the mischief which is going on. It is said that, in some instances, general febrile disturbance, with vomiting or diarrhœa, has shown itself; but, on the other hand, the appearance has been met with in persons who have died a violent death, and again in the bodies of individuals who have clearly died from disease in a remote part of the body.

The preceding facts and observations may perhaps be considered to justify the following conclusions:—

1. That perforations of the stomach, from solution are very rare in the human subject.

2. That they may occur in healthy and diseased states of the body.

3. That the perforation takes place after death; and depends on the action of the gastric secretion, which, in the opinion of some, is facilitated by a diseased state of the parietes of the stomach. But that the secretion is the chief, if not the sole cause, seems probable, from the fact, that the liver, spleen, and diaphragm have also been found softened, the latter even perforated, where lying near the aperture in the stomach. We must then imagine, either that these accidentally contiguous parts partake of the same disease as the stomach, or that disease of that organ is not necessary for its coats to become destroyed by the secretion.

4. That the secretion cannot be the healthy gastric juice, but some altered state of that liquid. This is rendered probable by the facts: 1. If it were the ordinary secretion, perforation would be much more common in healthy persons, dying suddenly, soon after a meal. 2. It would not be met with in diseased subjects, or those labouring under disease of the stomach.

5. That the exact nature of the liquid producing the change, and the circumstances to which it owes its solvent power, are unknown.

Guy's Hospital Reports.

Disorders of the Brain connected with Diseased Kidneys, by Dr. Addison.—The object of this communication is 1st, to point out the general character and individual forms of cerebral disorder connected with interrupted function of the kidneys, from whatever cause such interrupted function may arise. Secondly, to show that in recent as well as chronic disease of the kidney, the cerebral disorder is, not unfrequently, the most prominent and, occasionally, the only obvious symp-

tom present. And, thirdly, to establish a means of diagnosis in such obscure, or in unsuspected cases upon the peculiar character of the cerebral affection.

According to my experience, the general character of cerebral affections connected with renal disease is marked *by a pale face, a quiet pulse, a contracted or undilated and obedient pupil, and the absence of paralysis.*

So far as I have as yet been able to observe, the individual forms of cerebral disorder connected with renal disease, are the five following :

1st. A more or less sudden attack of *quiet stupor*, which may be temporary and repeated ; or permanent, ending in death.

2d. A sudden attack of a *peculiar modification of coma and stertor*,* which may be temporary or end in death.

3d. A sudden attack of *convulsions*, which may be temporary or end in death.

4th. A *combination of the two latter* : consisting of a sudden attack of coma and stertor, accompanied by constant or intermitting convulsions.

5th. A state of *dulness of intellect, sluggishness of manner, and drowsiness*, often preceded by *giddiness, dimness of sight, and pain in the head* ; proceeding either to *coma* alone, or to *coma accompanied by convulsions*, the coma presenting the peculiar character already alluded to.

Guy's Hospital Reports.

Tubercles of the Brain. By P. Hennis Green, M.B. — CASE I. Marie Brouet, eight years of age, was admitted into the hospital on the 15th of July. For the last five months she had complained of pain in the head, and presented various lesions of motility. Her parents both died of pulmonary consumption. The child does not now complain of pain in the head, and her intellectual faculties are perfectly clear ; pulse natural ; skin cool ; progression difficult. When she attempts to walk, movements are extremely irregular and uncertain, but do not resemble those of chorea. There is no lesion of sensibility ; no paralysis or contraction.

18th. The headache is now intense, occupies the frontal region, and is accompanied by bilious vomiting, with constipation for the last four days ; the child is agitated during the night, and slept little ; pulse 76. — Sina-pisms to the legs.

* The serous apoplexy of authors, in which the face is pale, the pulse small and quiet — the pupil often natural and obedient to light, and no paralysis, — the stertor is very peculiar and in a great measure characteristic — it has not the deep, rough, guttural or nasal sound of ordinary apoplexy — it presents more of a hissing character.

20th. Violent delirium during the night, which disappeared towards morning, and was succeeded by extreme agitation and restlessness; the child cries when approached; says that she feels no pain, and asks for food.

21st. Constant agitation, and cries during the night; in the morning stupor. The eyes appear prominent, and half covered by their lids; pupils dilated; tendency to retraction of the head.

22nd. The patient is much less stupid than she was yesterday. She answers when spoken to, but does not seem to be aware that she is in an hospital; does not complain of headache, though she frequently exclaimed during the night, "Oh, my head! my head!" no convulsive movement of the limbs; rigidity of the neck persists; no change of sensibility on either side of the body; eyes extremely sensitive to the action of light; pulse 108; obstinate constipation; tongue natural. — Four leeches behind each ear; sinapisms to the legs; injections; simple drinks.

30th. The child lies in a state of coma; extremities relaxed; head retracted; pupils dilated, with oscillation of the iris; sight and hearing are lost; excretions passed involuntarily; pulse 130; respiration 40.

In this state the patient lay until 8 o'clock, P. M., when general convulsions set in, the breathing became stertorous, and she died at 10 o'clock.

Body examined 33 hours after death. External appearance. — Emaciation; no cadaveric rigidity; greenish tint of the abdomen.

Nervous System. — The membranes which cover the superior portion of the brain present a natural appearance; at the base the arachnoid, near the circle of Willis and pons varolii, is separated from the pia mater by a gelatinous fluid. In the lateral ventricles there are about three ounces of turbid serum, in which are suspended some albuminous floculi; the lining membrane of the ventricles is rough, irregular, and covered here and there with false membranes.

The fornix and septum lucidum are diffuent. The nervous substance is not much injected.

In the centre of the cerebellum is a tuberculous mass as large as a chestnut. The surrounding cerebral matter is injected, but not softened.

Respiratory System. — The lungs are studded with miliary tubercles; the bronchial glands are also tuberculous, and some of them softened in the centre.

Abdominal Viscera. — The organs contained in the abdominal cavity are perfectly healthy.

CASE II. — Eugenie Vanier, nine years of age, admitted 21st May. The father of this child is more than 60 years of age. The mother died

of pulmonary consumption at the age of 32; complexion scrofulous; weak constitution; thorax malformed; had whooping-cough at the age of eight years, which lasted three months, and during which she expectorated bloody sputa; since then irregular accesses of fever; cough; intense headache, returning at irregular intervals; alternate constipation and diarrhoea; intelligence has remained undisturbed; no convulsive movements or paralysis were observed; loss of hearing for the last three months.

Present State. — Face pale and thin; extremities feeble; abdomen tumefied, and when pressed on can feel irregular tumours in interior, about umbilicus; ganglia of neck tumefied also; cough frequent, without expectoration; dull sound; bronchial respiration and gurgling under left clavicle; but little trouble of respiration; skin moderately warm; pulse 112; respiration 28; tongue moist and covered with a white fur; but little thirst; appetite capricious; constipation; abdomen painful; headache; deafness well marked; sees well; intellect clear; — purgative powder; gum water; milk.

During the succeeding days but little change presented itself; the only remarkable symptoms being the deafness, headache, and a remarkable degree of stupor; no diarrhoea; no stool, except after each injection; she continued in the same state, and died on 4th June, without any convulsion or struggle.

Examination 36 hours after Death. Nervous System. — The cerebral membranes are free from alteration; no infiltration of the pia mater is apparent; at the posterior and superior part of the left hemisphere is a tubercle about the size of a large pea, situate in the gray substance of the convolutions; the surrounding tissues are perfectly natural; a tubercle of a similar size is situate at the base of the same hemisphere, and is adherent to the tentorium cerebelli; the rest of the brain is healthy.

Respiratory System. — The larynx and trachea are healthy; the bronchial membrane is slightly injected; the bronchial glands are tuberculous; the left lung adheres throughout to the chest and diaphragm, and is studded with tubercles, some of which are softened; there are tuberculous cavities in the superior lobe of this lung, and the surrounding cellular tissue is the seat of chronic inflammation. The summit of the right lung, adheres to the costal pleura; tubercles less numerous than in the left lung; no cavern; the cervical ganglia are enlarged and tuberculous; pericardium and heart healthy.

Abdominal Viscera. — The mesenteric glands are greatly enlarged and tuberculous; mucous membrane of the stomach normal; the duodenum near its termination presents several lenticular ulcerations, evi-

dently produced by miliary tubercles, which occupy the centre ; the same kind of ulcerations are found throughout the whole of the small intestines, and become more numerous in the neighbourhood of the ilio-cæcal valve ; the mucous membrane in the neighbourhood of these ulcers is thinned, but furnishes slips of two to three lines in length ; the large intestines also contain ulcerations, less in number, and a quantity of indurated fœces. *Liver*, of a brown-red colour, adheres superiorly to the diaphragm ; contains a few miliary tubercles, which are also found in numbers in the spleen ; there are a few miliary tubercles in the cortical substance of the kidneys, and the right kidney contains one as large as a nut ; the glands surrounding the pancreas are tuberculous, but that organ is healthy.

CASE III. Jeanne Masson, æt. 10 years, admitted June 14. Six weeks ago she began to complain of pain over the whole head, most marked in forehead, causing insomnia and fretfulness ; vomiting, which continued 3 weeks ; constipation ; — followed by loss of power in progression, also cough ; — for 15 days irregular fever ; great pain, and stiffness in muscles of neck, and confinement to bed ; no delirium or convulsions ; epistaxis ; has used leeches at the commencement ; sinapisms to legs ; purgatives. — *Actual Condition*. (On the 15th.) Decubitus dorsal ; head inclined backward to the right ; pain on motion of head ; pain in forehead, and very severe in back of neck ; slight strabismus to the left ; intolerance of light ; pupils moderately dilated, contractile ; the sight good ; lids half open ; no deviation of mouth ; tongue white and dry, protruded with difficulty ; no vomiting ; no stool ; delirious in the night, with great agitation ; now sensible, but rather dull ; sensibility and motility of arms unimpaired ; motility of lower extremities impaired ; respiration 16, deep and irregular ; fever moderate ; pulse 104 ; — leeches ; injections.

June 16th. Agitation and delirium at night continue ; more drowsy ; pupils dilated ; face pale ; pain in head, &c. as before, as also the other cerebral symptoms ; abdomen retracted ; tongue dry and brown ; no sudamina or rose-spots ; trifling cough ; fever considerable ; pulse 94, regular ; respiration 14, irregular ; — 6 leeches to neck ; injections, &c.

June 17th. Stupor extreme, but roused by being spoken to ; cries when moved ; pupils moderately dilated ; no strabismus ; face slightly coloured ; pulse small, 110 ; respiration 28, 32, unequal ; abdomen free from pain ; no stool ; rigidity of upper extremities ; tongue deviates to the left, protruded with difficulty ; no strabismus ; motion in legs, which she complains feel stiff ; impaired sensibility on both sides of the body, especially on the right side ; — 8 leeches to neck ; calomel 8 grs. ; injections.

June 18th. Delirium at night; profound coma; after a time this passed away and she answered questions correctly in a low feeble voice, and complained of pain in back of neck; left eyelid paralyzed, pupil dilated; right pupil not seen; tongue excessively brown and dry, inclining to left side; left arm somewhat stiff; sensibility unimpaired; no paralysis of either extremities; skin cool; pulse 124; respiration tranquil, 36; died on morning of 19th; intellect unimpaired until nearly the last moment.

Examination 24 hours after death. Head.—The cranium is well formed. The dura mater does not present anything remarkable; the arachnoid, which covers the superior surface of the brain, is quite transparent; the pia mater, in this portion, is not injected, nor does it contain granulations, or yellow matter; at the base we observe the same healthy condition of the arachnoid, but the pia mater contains some granulations in the fissure of Sylvius, on both sides; no other change to be found in the membranes. The convolutions of the hemispheres present a flattened appearance, but their colour and consistence, interiorly, are normal; the white substance, down to level of ventricles, is also normal; the ventricles contain about four or five ounces of clear serum; the posterior third of their floor is softened to a depth of two or three lines; the fornix, septum lucidum, and part of the corpus callosum are softened; the rest of the brain, though divided minutely, presents nothing abnormal; arachnoid, covering the cerebellum is transparent; pia mater is moderately infiltrated with clear serum; the arachnoid is found to adhere to the surface of the cerebellum at a level with the lower part of the left lobe for the size of a two-franc piece; underneath we discover a yellow substance, which, on examination, is found to be composed of a tubercular mass as large as a white plum; it is made up of numerous smaller tubercles of the size of a pea, collected together and intermixed with indurated nervous substance; the inner surface is mamellated and covered with portions of softened pulp.

In the right lobe of the cerebellum is a second tubercle of nearly the same size and appearance; it lies deeper in its substance, and is not seen externally; round it the nervous substance is softened for about one line deep; pons varolii and spinal marrow examined, but no traces of alteration in them.

Chest. There was a vast tubercular excavation in the centre of the right lung, at the upper part, and numerous tubercles in both lungs, and in the bronchial and mesenteric glands. The rest of the abdomen was not examined.

CASE IV. Desibier, nine years of age, was admitted into the hospital

on the 21st of February, 1837. The child has been vaccinnated. About three weeks ago she was seized with an attack of sickness, which commenced with a sense of general fatigue, coryza, and epistaxis. During the last eight days she has experienced increased difficulty of breathing, with symptoms of fever. There was also some vomiting at this time; has never had any diarrhœa.

Present state.—The face is somewhat tumid and congested; she lies on the right side. The voice is hoarse; coughs frequently, and the sputa are streaked with pure blood. On percussing the chest the sound is equally clear on both sides; there are some mucous and sibilant rattles on both sides. Respiration diaphragmatic, 72; pulse 126, moderately developed; skin hot and moist; no pain in the chest; some sensation of pain in the larynx; no diarrhœa; headache; tongue moist, covered with a white fur; the intellectual faculties are perfectly clear. — Decoct. of Mallows; tartar emetic, one grain; almond mixture, with three grains of Kermes mineral; blisters to the legs; laxative injection. The child vomited two or three times after the emetic, but no amelioration ensued.

22nd. The nurse assures us that the child has been delirious all night. Now, at the visit, she answers rationally, and permits us to examine the chest without making any resistance. There is a slight purple tint over the face; the chest sounds well, but we have now discovered a gurgling beneath both clavicles; there is an abundant mucous rattle throughout the chest on both sides; no crepitating rattle; has had two liquid stools within the last 24 hours; pulse feeble, 150; respiration 72. — Draught with squills; four ounces of Malaga wine.

24th. She has had a severe access of delirium during the night, but is now calm in the morning; the other symptoms continue unchanged. — Almond emulsion, with five grains of Kermes mineral; emollient injection; blisters to the legs.

26th. The child has lain since yesterday in a state of constant delirium; pulse excessively quick; respiration 52; face of a purple colour; no vomiting. She continued to sink during the day, and died in the evening.

Body examined 40 hours after death.—The face and limbs are infiltrated.

Cranium.—On the convex surface of the right hemisphere there is a number of yellowish-brown granulations situate in the pia-mater, which envelopes the vessels running along the anfractuositities. These granulations are principally found about an inch from the longitudinal fissure, and are quite distinct from the glands of Pacchioni, which seem to be

enlarged. There are some granulations, also, on the lateral surfaces of both hemispheres, and but a very few at the base of the brain. There is a considerable infiltration of serosity in the pia mater. On the right hemisphere there are 7 or 8 tubercles of a small size adherent to the pia mater, and penetrating into the cerebral substance. On incising the nervous matter by very thin layers we discover about 20 more tubercles lodged in the gray substance; these vary in size from a pin's head to a small pea. The surrounding cerebral substance is healthy in structure; the gray matter is somewhat injected, but of normal consistence. There is no effusion of serum in the lateral ventricles, the walls of which present a natural appearance.

Respiratory system.—The larynx, trachea, and bronchi are lined with a quantity of puriform mucus. Some recent adhesions of the left lung to the side of the chest; underneath the left pleura a multitude of white and gray granulations. Both lungs contain a number of tubercles, some of which, at the upper part, are completely softened; around some of them the pulmonary parenchyma is hepatized. The heart is voluminous, and contains some black coagulated clots.

The viscera of the abdomen were examined in a hasty and imperfect manner. We observed a great number of tubercles underneath the peritoneal coat of the intestines, and a few rounded ulcerations near the termination of the small intestine.

Remarks. It is a curious point in the history of medical literature that, although tubercles of the brain constitute one of the most frequent and important affections of the nervous system in children, they have been neglected by all systematic writers on diseases of children, without exception. I am acquainted with almost every work of any reputation on children's diseases, in all European languages, and cannot call to mind a single one in which even a few lines, much less a chapter, are devoted to the consideration of cerebral tubercles. This cannot arise from the comparative rarity of tubercles of the brain in children, for a long and laborious investigation of this interesting subject enables me to affirm that in point of frequency, they must be ranged next to hydrocephalus, and that for every three cases of the latter disease, there exists one of the former. On the other hand, tubercles of the brain are extremely rare in the adult subject. M. Louis examined 117 bodies of adults who had died of pulmonary consumption, without meeting with more than one example, and all who have been in the habit of making numerous *post-mortem* examinations will remember how seldom this lesion of the nervous centres in adults presents itself to the pathologist. The theses of some of the French *internes*, however, contain a mass of

valuable information on tubercles of the brain; amongst the best of which may be mentioned those of MM. Mitivié, Giraud, Tornellé, Leveillé, and Dufour. My friend, M. Constant also, who, had he lived, would have formed one of the brightest ornaments of medicine in France, published some excellent observations on cerebral tubercles, in the "*Gazette Medicale*," but a complete monograph on the subject is yet a desideratum in medical literature.

Tubercles of the brain often exist without producing any disturbance of the cerebral functions, and are only discovered on examination of the body after death. Of this I have seen frequent examples. The foreign body may even attain a very considerable size without giving rise to irritation or inflammation of the surrounding nervous tissue, and unless situate in the neighbourhood of some of the principal nerves, or important divisions of the brain, the pressure which it must necessarily exercise, seems, as it were, to pass unheeded by the centre of the nervous system. In other cases a small tubercle will excite more or less irritation and congestion of the surrounding substance, and develop a train of symptoms which, although frequently obscure still present a certain character, or order, from which the nature of the lesion may be discovered.

In the present remarks I do not propose to enter, at any length, into the history of cerebral tubercles in children, but merely to direct attention to a few of the leading symptoms which presented themselves in the cases above described.

Headache, more or less intense, either perpetual or remittent, sometimes occupying the frontal region, at other times corresponding exactly with the seat of the tubercle, is a very frequent symptom. It existed in all the cases which I have related. In that of Masson, where the tubercle occupied the posterior part of the cerebellum, the headache was principally fixed in the back of the head and neck.

Chronic vomiting, occurring at uncertain intervals, and not apparently connected with disorder of the alimentary canal, is another symptom which constantly exists, and is of great value in the diagnosis of cerebral tubercle, when conjoined to headache and constipation of the bowels. The latter symptom is one to which too much attention cannot be paid. It may depend, of course, on a variety of causes, but long-continued and obstinate constipation in children is generally, as far as I have observed, connected with some organic lesion of the nervous centres, and, more especially, with chronic meningitis, or tubercle.

Some disorder of the motor power, manifested by irregularity of the gait, an incapability of harmonising the movements, partial paralysis, or a contracted state of one of the limbs, often exists as a symptom of cere-

bral tubercle. It preceded the acute symptoms, for some time, in the case of Jeanne Masson; and I have frequently noticed a similar phenomenon both in cases of tubercle and of chronic meningitis, the forerunner of hydrocephalus. The intellectual functions are seldom disturbed at an early stage of cerebral tubercle, but as the disease advances, more or less change, either in the temper of the child, the memory, or some other mental faculty, usually manifests itself; irregular accesses of fever (which is often mistaken for infantile remittent fever) occur, with delirium at night, and, in some instances, the patient is gradually reduced to a state of complete idiocy.

Tubercles of the brain in children commonly destroy life, either by inducing acute hydrocephalus, or by exciting inflammatory softening of the surrounding nervous tissue. Indeed the relation between acute hydrocephalus and tubercle is much more close than has been generally admitted. On some other occasion I shall endeavour to determine the precise relation, by the statistical records which I possess, but my impression is, that tubercles of the nervous centres exist in from one-fourth to one-sixth of the cases of hydrocephalus which occur in children above 12 months of age.

The influence of age on the production of cerebral tubercle is very remarkable. On looking over a list of 42 cases which I have observed within a period of 5 years, I find that there occurred,

At the age of 1 year . . .	1	At the age of 9 years . . .	0
“ 2 . . .	11	“ 10 . . .	2
“ 3 . . .	5	“ 11 . . .	0
“ 4 . . .	5	“ 12 . . .	1
“ 5 . . .	8	“ 13 . . .	0
“ 6 . . .	2	“ 14 . . .	0
“ 7 . . .	5	“ 15 . . .	1
“ 8 . . .	1		—
		Total,	42

Of 38 other cases which have been observed by different *internes* at the Children's Hospital, Paris, there were,

At the age of 1 year . . .	0	At the age of 9 years . . .	3
“ 2 . . .	0	“ 10 . . .	4
“ 3 . . .	8	“ 11 . . .	0
“ 4 . . .	5	“ 12 . . .	0
“ 5 . . .	5	“ 13 . . .	1
“ 6 . . .	6	“ 14 . . .	0
“ 7 . . .	3	“ 15 . . .	0
“ 8 . . .	3		—
		Total,	38

Hence, in a series of 80 cases, we find the maximum number to occur between the ages of 2 and 4 years, inclusive. I have already shown, in another paper (*LANCET*, Vol. II., 1835-6) that acute hydrocephalus occurs most frequently between the ages of five and seven years.

The diminution in the number of cases after the second dentition which my own table exhibits, is very remarkable, and worthy of notice. Scarcely a case occurred after the age of seven years.

In the preceding remarks I have merely indicated a few of the leading points connected with a lesion which has been, as I have already observed, entirely overlooked by writers on the diseases of children.

Lancet.

Cases of Hydrophobia. By C. F. FAVELL, M.D., &c. — CASE I. Wilkinson, a fine stout man, in robust health, 37 years of age, a grinder by trade, and addicted to habits of intemperance, was seized with symptoms of hydrophobia, soon after getting out of bed, on the morning of the 13th of April, 1837. He had been bitten by his own dog, (which at the time, was not supposed to be rabid,) eight weeks previously. He died on the 15th, at 11 A.M. The body was minutely examined by Mr. Gregory, in the presence of several medical friends. A female attendant stated that nine hours after death, the upper part of the body was so warm as almost to induce her to believe that the man was not dead: The lower extremities were at the same time quite cold. As the woman had not a thermometer, she judged of the relative temperature by her hand.

External Appearance. — The body well developed; face pale; considerable lividity about the lips, anterior part of the neck, clavicles, and posterior parts of the body.

Head. — Scalp and calvarium natural; dura mater slightly congested; effusion of bright florid blood upon the arachnoid membrane, where it covers the posterior portion of the left hemisphere; beneath the arachnoid, considerable effusion of colourless fluid, the membrane itself slightly opaque; the vessels of the brain much engorged, particularly at the posterior part; the substance of the cerebrum darker than natural in colour, and exhibited numerous bloody points when incised; no abnormal quantity of fluid in the ventricles; the pons varolii was of a darker colour than natural, and the substance of the cerebellum was considerably softer than the cerebrum.

When the body was turned over, in order that the spinal chord might be examined, the head being suffered to hang down, a large quantity of very dark-coloured fluid blood escaped.

The *spinal canal* was opened as far as the fifth dorsal vertebra. The external covering of the chord was injected with blood, more especially, in the cervical portion. On slitting open the dura mater, the pia mater was found extremely injected, and for a short space, commencing at the third dorsal vertebra, infiltrated with air; the gray substance of the chord was of a darker colour than natural, and the blood-vessels accompanying the nerves, were much congested; when the chord was removed, the membrane beneath it was found to be extremely congested, especially in the cervical portion.

Thorax. — The muscles on the anterior part of the body, well developed, and of a dark-red colour; the vessels of the lungs much congested with dark-coloured blood; in the superior lobe of each lung, there was a deposition of tubercular matter; the bronchial tubes strongly injected; the heart, natural in size, covered anteriorly with fat; the right ventricle contained a considerable quantity of dark-coloured blood, mixed with air; in the left ventricle there was a deposition of fibrine.

The *Pharynx* was livid, and the small vessels were considerably injected; the *œsophagus* natural; no morbid appearance in the glottis, epiglottis, or larynx.

Abdomen. — The right kidney was small, lobulated, and strongly injected; the left kidney larger than the right, but not nearly so much congested; incipient degeneration of the liver; spleen natural; stomach and intestines healthy.

CASE II. Ibotson, ætat 32, a grinder, of intemperate habits, a friend and companion of the subject of the foregoing case, was bitten by the same dog, and on the same morning as Wilkinson. At the time of the bite, he was in good health. For a few days before the 14th of April, he complained of being unwell, of pain in the head, vertigo and listlessness. On the 14th, having heard that his friend had been taken ill, the day before, he went to see him. When he arrived at home again, he expressed himself as feeling very poorly, and then, for the first time, experienced considerable difficulty in deglutition. Symptoms of hydrophobia soon became evident, they rapidly increased, and he died on the morning of the 16th. No unnatural heat was observed in the body, a few hours after death. The *post-mortem* examination took place on the morning of the 18th, and was very ably conducted by Mr. Gregory. There was nothing remarkable in the external appearance; slight lividity about the shoulders, clavicles, and posterior parts of the body.

Head. — Decided congestion of the vessels of the dura mater; effusion of blood beneath the arachnoid membrane, covering the anterior

and posterior lobes of both hemispheres; no effusion of serum; the membrane itself opaque. The vessels of the brain congested; the brain itself firm, exhibited numerous bloody points, when incised; effusion of serum on the surface of the cerebellum, and at the base of the skull; the cerebellum was not softer than the cerebrum.

When the body was turned over, after the brain had been removed, a large quantity of dark coloured fluid blood escaped.

Spinal Chord. — The dura mater, covering the chord, was very much injected, but much more so in the dorsal than in the cervical portion. The vessels of the pia mater, as well as those following the course of the nerves, injected; *slight infiltration of air beneath the pia mater, covering the upper part of the dorsal portion of the chord*; the chord itself slightly injected; no effusion beneath it.

Chest. — Lungs considerably congested; adhesion between the pleuræ, on the left side; small hardened granular bodies in the superior lobe of each lung. Heart of moderate size; the left ventricle contained a small quantity of dark-coloured blood, but no air; the right ventricle contained about the same quantity of similar coloured fluid, mixed with air.

The *Epiglottis* and *Larynx* intensely congested; the redness proceeding into the bronchial tubes. In the upper portion of the œsophagus there was an ulcer, but apparently not of recent formation; the rest of the œsophagus healthy.

Abdomen. — Incipient degeneration of the liver, but no congestion; no congestion of the spleen; kidneys healthy; the stomach not injected, but the mucous membrane was of a greenish colour.

Lancet.

Anomalous Disposition of the Colon leading to a fatal result. — [Dr. Buchanan of Glasgow, has published several cases in the London Medical Gazette, the object of which is to prove, that an unnatural disposition of the colon may lead to fatal obstruction of the bowels. It can be, perhaps, hardly proved, that malformation, which is far from uniform in its character, is the real cause of death in all the cases mentioned. We select the following, which is the most accurately reported, as an illustration of the fact the author has attempted to establish.]

James Consul, apparently from 40 to 50 years of age, had long been subject to constipation of the bowels, but never to such a degree as to injure his health. For some time previous to my seeing him, his bowels had been more confined than usual, and he had been troubled with fla-

tulency and swelling of the belly. On examining the belly, I found it much distended, and the swelling had all the characters of tympanitis, being soft, elastic, and rescunding on percussion; pulse not affected; calomel and jalap, castor oil, Epsom salts, senna, scammony, elaterium, and other cathartics, with injections, were all tried either singly, or in combination, but to no purpose. On examination, the rectum was found empty; meanwhile, the swelling of the belly went on increasing, until it was truly terrible to behold. In this miserable condition, the patient lay on his back, with his legs bent, and his knees drawn up to avoid all stretching of the integuments of the abdomen. The only other posture he could endure, was resting on his knees and elbows. His mental faculties remained unimpaired to the last; he died in about 8 days from the time I first saw him, and about 12 days from the last evacuation of his bowels.

The body was examined the day after the patient's death. On opening the cavity of the abdomen, the colon enormously distended, and occupying an unusual situation, was the first, and indeed the only object that presented itself; all the other viscera being concealed behind its convolutions. Four immense bags were seen running nearly parallel to each other, and in the direction of the length of the body; while another similar one ran at right angles to them at the upper ends. So extraordinary was this appearance, that notwithstanding my having seen two similar cases previously, it was only after tracing the colon from end to end that I became satisfied that I had as yet seen no other part of the intestines. The colon observed its usual course, till it reached the left iliac region, when it made a sweep to the right, passing behind the pubis, and returning across the lowermost lumbar vertebræ; it then ascended, till it came in contact with the transverse arch, when turning to the right, it descended to the sacrum, thus forming the two middle bags above described. Every part of the intestine was greatly enlarged in diameter, but the enlargement was greatest at its lower end, where it was not less than from 5 to 6 inches in diameter. The upper part of the colon contained chiefly wind, the lower part only fœces of a yellowish-white colour, and of the consistence of very soft mortar. On lifting up the folds of the colon, the small bowels were found inflated to the uttermost; the stomach was empty, and of its usual size; there was no effusion of fluid in the cavity of the abdomen, and the peritoneal covering of the bowels exhibited no traces of inflammation, although there was a good deal of engorgement of the veins of the mesentery.

It will naturally be asked, whether the examination of the body did not afford any explanation of the obstruction of the bowels? To un-

derstand the nature of this obstruction, it is necessary to call to mind the description of the colon given above. After leaving the left iliac region, the colon crossed the mesial line of the body behind the pubis; immediately returning, it ascended on the left side as high as the transverse arch, and then it descended on the right side, keeping in front of the inflated small intestines, till it turned back over the promontory of the sacrum, to be bound down to the anterior surface of that bone by the peritoneum. Now, just at the point where it turned backward, and was most pressed upon by the inflated small bowels from behind, it was crossed in front by the beginning of the ascending portion of its own sigmoid flexure. This last part of the intestine was very heavy, the lower part of the colon containing fœces, and nothing else. The obstruction in the colon was evidently caused by one of its own massy convolutions passing it in front, and the inflated small intestines and inferior end of the vertebral column lying behind it. At the compressed part the two sides of the intestine were in contact; immediately below, it was quite empty; immediately above, it was more than 5 inches in diameter, and gorged with fœces; and on lifting up the anterior compressing portion, it left the mark of a quarter of a circle impressed upon the soft fœculent mass in the portion behind. — *Med. Gazette.*

Fistulous opening upon each side of the Neck communicating with the Œsophagus. — Mr. Cusack presented the œsophagus of a man who had been affected with venereal, and had taken mercury irregularly. He was admitted into Stevens's Hospital in a broken down state of health; there was a remarkable fullness on one side of the neck, with two tumours, one on each side of the mesial line, above which, were ulcers apparently of a venereal character; another existed near the clavicle; it subsequently was found that a greater part of his food and drink escaped through the fistula in the neck. The patient died suddenly from symptoms of peritonitis from perforation. A perforating ulcer was found in the small intestines; the ulcers in the neck were found to communicate with the œsophagus by two openings, around which, the appearance of disease in the tube were much slighter than could be expected in a case of the kind. Mr. Cusack, however, believed that the ulcerative process had begun in the œsophagus; the trachea was healthy. Mr. C. was not aware that any similar case was upon record. — *Dublin Journal.*

Contributions to Intra Uterine Pathology. — Dr. James Simpson has

recently published some interesting observations on the disorders incidental to foetal life. In his second communication on this subject, (*Edinburgh Medical and Surgical Journal*, July, 1839,) he has shown very satisfactorily, that many forms of congenital hernia; as well as several varieties of malformations, both in the way of displacement and of arrested developement, in the digestive, urinary, and genital organs, may be referred to peritoneal inflammation and consequent adhesions occurring among the viscera of the abdomen during the developement of the foetus in utero.

Among the forms of hernia thus produced, he enumerates umbilical, diaphragmatic, and inguinal hernia. The malformations by displacement that may result from foetal peritonitis, must be varied according to the precise seat of the inflammation, its extent, and the period of foetal life at which it is established.

The displaced organs may be seen, first, in some of the temporary positions assumed by them during their evolution, and which they occasionally continue to occupy in cases simply of arrested developement. Or, secondly, they may be found drawn to a greater or less extent out of their position, in consequence of the contractile power exerted by false membranes that form upon their surface.

There is, according to Dr. Simpson, reason to believe, that inflammatory action in the other serous cavities of the embryo, may lead to occasional malformations among the contents of these cavities. In this way he accounts for several malformations and displacements of the thoracic viscera; and, says he, there is much reason to suppose that one or two varieties of anencephalous malformations are truly referable to the purely physical effects of hydrocephalic inflammation and effusion.

He has, further, endeavoured to trace several varieties of malformation to a similar origin. Thus, the extroversion of different organs, and the disfigurement of the limbs or surface of the body, may be referred to inflammatory adhesions that are occasionally formed between the embryo and the inner surface of the amnion. "I have," says he, "in my possession, a preparation of a malformed foetus of about 14 weeks, in which an inflammatory effusion has taken place in different parts of the surface of the body, and has firmly united one of the hands to the corresponding cheek of the embryo."

New mode of preparing the Tincture of Digitalis. By Mr. Donovan of Dublin. — It consists in plucking the proper leaves off the living plant, in the spot where it grows, instantly throwing them into the strongest alcohol, digesting for 6 weeks, pressing out the tincture, and filtering it.

Here all the sources of deterioration are obviated, and we preserve the virtues of the recent plant unimpaired.

The ratio of the recent plant to the rectified spirit may be so contrived that the resulting tincture shall correspond with the ratio of the dried plant to the proof spirit, as indicated in the Dublin Pharmacopæia.

In order to do this, let 10 ounces and a half, Troy, of leaves be pulled from the growing plant, and plunged into a bottle containing two pints and three-quarters (wine gallon measure) of alcohol 0.815. The strength of the alcohol will be reduced by the water to the strength of rectified spirit 0.840, and after the proper digestion a brilliant green tincture will result, as perfect as it is possible to procure it. The strength of this tincture compared with that produced by the Dublin Pharmacopæia will be, so far as ratio is concerned, as one to three, and hence it might be given in three times the quantity for a dose. But as there is every reason to believe that its strength is incommensurate with this ratio, it might be prudent to begin with the same doses as have been always employed. In this case the leaves will be covered by the alcohol; but a month's digestion, in a warm place, will be required, with frequent agitation.

Dublin Journal.

On the Effects of Bloodletting and of Blisters to the Chest, in the Pneumonia of Children. By M. Alfred Bequerel. [The report of M. Bequerel is founded on an analysis of cases collected at the Children's Hospital, Paris. It may serve as a useful appendix to the work of MM. Rilliet and Barthez, which is analyzed in the present number of the Journal; but it should ever be borne in mind, that the cases which occur under the circumstances before us, are not the most favourable cases by which to judge of the efficacy of an active anti-phlogistic treatment.]

From the 1st of April to the 1st of October, 1838, 421 children entered the female wards devoted to the reception of acute diseases, darts, affections, and ophthalmia — of these 133 died — Amongst them there were as follows: Simple pneumonia 15 cases, of which 11 died. Measles 59 cases — complicated with pneumonia 21 cases, of which 20 died. Smallpox 16 cases — complicated with pneumonia 4 cases, of which 3 died. Scarlatina 10 cases — complicated with pneumonia 1 case; 1 died. Typhoid fever 18 cases — complicated with pneumonia 2 cases; 2 died. Hooping cough 14 cases — complicated with pneumonia 5 cases; 5 died. The plan of treatment in the cases where the pneumonia appeared to constitute the principal disease, was 1st,

bloodletting, and after that blisters to the chest. The state of the constitution, the strength of the pulse, the degree of reaction, the heat of the skin, were the guides as to the extent, &c., of their employment.

In simple pneumonia, bloodletting appeared to be useful in 4 cases, all children above 5 years of age, and who were attacked while in perfect health — the commencement of resolution dated from the 7th to the 10th day — blisters were also used in these cases. In the remaining cases, bloodletting, both from a vein and by leeches, generally, did no good: it sometimes lessened the strength of the pulse, and improved the local symptoms; but commonly it did harm by increasing the debility, and, apparently, by adding to the danger of congestion of the bronchi, which is sometimes the immediate cause of death. Blisters appeared equally useless. In some cases, the pain they created induced a state of restlessness which could not but be injurious. The medium duration of the fatal cases was 10 days.

In the cases where pneumonia existed, as a complication of rickets or of tubercles, bloodletting, &c. never appeared to be useful, and often injurious.

In the cases where the pneumonia existed as a complication of measles, the effect of bloodletting and of blisters was even less useful than in the simple cases. This mode of treatment appeared to weaken the patients and, perhaps, hastened their death. In 15 of these cases the pneumonia appeared at the same time with, or during, the progress of the eruption — in the remainder, during, or after, the period of desquamation. In the cases where the disease existed as a complication of whooping-cough, scarlatina, smallpox, &c., this treatment produced no better results.

Arch. Gen. de Med., April, 1839.

Present Condition of the Profession of Medicine in Spain. — Judging from what I have seen of the medical men in Spain, I do not think them worthy of the odium and disrepute under which they suffer in other countries. It cannot be denied that they are, and have been for many years, behind the members of the profession of several other kingdoms of Europe in improvement; that they have made few discoveries in the nature and treatment of diseases; in the proper method of curing wounds, fractures, and other injuries; or in the construction of instruments and apparatus; or in chemistry, and other collateral sciences. But, still, they are not as unskilful and as illiterate as they are represented; and whether they are deservedly so or not, it is certain that they possess great respectability and influence with all classes of society. Indeed, it is not

a little surprising that, amid all the revolutions, and many disturbances which have taken place of late in the kingdom, its faculty have been permitted, in a great degree, to remain in a comparative state of tranquillity; and while the members of every other profession have been retrograding, and the all-powerful priesthood have been reduced to the lowest condition, that they have continued unchanged, and have maintained themselves in all their pristine prosperity.

It appears to me that one of the principal causes of the disrepute in which the Spanish faculty is held by their brethren, is the very small compensation they are said to receive for their services. Their compensation, measured by a foreign standard, is truly moderate and inadequate, but in reality is not so much so as believed; for, in the first place, their fees being low, they are oftener employed; and, in the second, they are paid in cash, so that they do not, from having long accounts and numerous charges against their patients, appear to be in the receipt of very large incomes, and yet have, in fact, very small ones, as is the case in the United States and other countries, where accounts are kept for professional services rendered. Moreover the Spanish physicians enjoy very great advantage in this respect, that they have none of their practice taken away from them by quacks, and the unlimited sale of nostrums; for neither the former nor the latter are permitted — laws existing for the suppression of all such nuisances to the profession and to the public.

From the Spanish faculty partaking in a great measure of the reserve peculiar to the nation, I was not able to learn as much of them as otherwise I should; but, from what I could observe, they may be said to be polite and dignified in their manners; as well, if not better, informed than any other class of men in Spain; and in their profession much more practical than theoretical; being little given to writing. In this respect, they are extremely singular, for an original professional work is nearly unknown; and even to periodicals they seem to have an antipathy: for, according to what I could learn, the only one published is in Madrid, and this has so limited a circulation that it was impossible for me to obtain a single copy. For recent information they rely almost exclusively on French publications, and chiefly on the periodicals published in Paris. The only English works I met with were those of Cullen and other medical authors of about the same period. These works were mostly translated into Spanish. Of those by American authors I met with none; and the Spanish physicians seem to be acquainted with few of even the most celebrated of them. Finally, in consequence of the perusal of French publications, Spain having been so often over-run by their

armies, and many of the Spanish faculty having been partly, if not altogether, educated in the medical schools of France, their practice appears to be chiefly that of the modern French school, though it still partakes considerably of the ancient practice in Spain and other parts of Europe.

Horner, in Bell's Med. Lib.

Ivory Bougies.—M. Charrière, the surgical instrument maker of Paris, has exhibited to the Academy bougies made of flexible ivory, prepared by extracting the calcareous matter. They have this advantage over the elastic bougie, that they can be prepared in a few days, while the latter require months. They have also this practical advantage, that when dry, the desired curve may be given to them which is retained. The drier they are when introduced, the more they expand, without losing their firmness.

New Method of Cauterizing the Urethra.—Among the novelties presented to the French Academy, is a new instrument for cauterizing the urethra, on the principle of the hydrogen lamp. A piece of platina sponge is fitted to the end of a hollow gum-elastic sound, which serves to transmit a current of hydrogen gas; the gas ignites the platina, and thus the stricture may be cauterized! We wonder what will be the next improvement in the treatment of this disease. Might not the instrument be so modified as to transmit, at the same time, a current of oxygen, and thus *make water* for the patient—a great desideratum in such cases?

THERE are now four medical schools in successful operation, in this State. As the time has arrived for them to commence their course of instruction for the season, we would express our wishes for their continued success, as well as for their improvement in all that may contribute to the advancement of medical education. We do not forget that the first effort in this country, in favour of medical education, was made in this city, and that the present College of Physicians and Surgeons, one of the oldest now in operation, has been the nursery of many of the ablest and most eminent men among us. The new session will introduce two new lecturers, of whom much is expected. We understand also, that the Professor of Anatomy will open the dissecting rooms immediately, and that he will devote much of his time to individual instruction. It is to be hoped that our students will awaken to the great importance of this branch of elementary study, which, it must be confessed, has been too much neglected of late.

The new Albany school, commences its second session to-day. The professors are sanguine in their expectation, of drawing together a large class. The munificent manner in which this Institution has been endowed, must afford great gratification to every liberal minded member of the profession, as an evidence that its true dignity and importance has been properly appreciated. It stands in striking contrast with the miserable policy of the council of the University, which overwhelmed the opening of a fair prospect for increasing the medical reputation of this city. We profess to be the friends of a generous rivalry, as a great means of improvement, and we believe the nearer this is brought home, the better.

The schools at Fairfield and Geneva, we understand, are also just commencing their courses of lectures. We shall be glad, at any time, to receive their support, and to merit any assistance in forwarding the great object for which we are all pledged. It is certainly our well-founded belief, that a State which contributes so largely to the education of medical men, will engage, also, in support of a project whose aim it will be to advance the same object. No one doubts the ability, — it remains to be seen if the inclination exists.

Medical Society of the City and County of New-York. At the Anniversary Meeting, in July, the following gentlemen were unanimously elected officers for the ensuing year: F. U. Johnston, *President*; W. W. Miner, *Vice-President*; Benj. R. Robson, *Treasurer*; Benj. B. Coit, *Corresponding Secretary*; Dudley Atkins, *Recording Secretary*.

Censors: — Isaac Wood, James O. Pond, Henry D. Bulkley, James Macdonald, and Thomas C. Chalmers, vice A. E. Hosack, who declined serving.

Delegate: — C. R. Gilman, vice J. R. Manley, resigned.

A Committee was appointed to revise the By-Laws.

A Committee was also appointed to see that the law, (passed by the Legislature of the State, May, 1836,) in relation to the admission of persons from other States, and from foreign countries, be duly enforced. The law is the following: "No person coming to this State from another State, or country, shall be admitted as a legal practitioner of medicine, until he shall have been examined by the State Medical Censors." The State Censors are Drs. E. G. Ludlow, J. R. Manley, and J. C. Cheesman.

College of Physicians and Surgeons. Dr. John R. Rhinelander has resigned the Chair of General, Surgical, and Pathological Anatomy, in this Institution. We are informed that the Professor of Descriptive Anatomy, and the Lecturer on Surgery, will instruct in these branches during the coming session.

Bloomingdale Asylum. Dr. Wm. Wilson has been elected Physician to this Institution, vice Dr. Benj. Ogden, resigned.

Brooklyn Hospital. The Common Council of Brooklyn has appropriated a small sum for the establishment of a Hospital. A much more liberal grant will be necessary for its successful operation. It is to be hoped, that time will effect this.

Dr. H. Green of this city, has been elected Professor of the Theory and Practice of Medicine, in the Vermont Academy of Medicine, at Castleton. He has declined the appointment.

Paris Medical Gazette. We notice in the daily papers, a "Prospectus," to translate and republish this excellent periodical, in this city.

Baltimore Journal. We are informed that a new Quarterly Medical Journal is about appearing in Baltimore, at the low price of \$2 50 per annum. Its size, however, will be considerable smaller than that of most of the Quarterly Journals.

Jefferson College. Drs. Colhoun and Geo. McClellan, have been succeeded by Drs. Huston and Pancoast, in the Professorships of *Materia Medica* and Surgery in this Institution.

Cincinnati College. The Medical Faculty belonging to this Institution have resigned. Dr. Drake, we understand, has accepted an appointment in the Louisville Medical Institute.

London. Dr. Chambers, after twenty-three years of service, has resigned his situation as physician to St. George's Hospital. Dr. Hope, the well-known writer on Diseases of the Heart, has succeeded him. Dr. C. J. B. Williams, an excellent writer on Diseases of the Chest, has succeeded Dr. Eliotson, as Professor of Medicine in University College. He also takes Dr. E.'s place, in the North London Hospital, which is the Clinical School to the University.

Dublin. A great meeting of the Physicians and Surgeons of Ireland has been held at Dublin, for the purpose of attempting some reforms in the existing Medical Institutions of that country. The principal objects of the meeting appear to have been the following: To unite the profession, i.e. those entitled Physicians and Surgeons, in one body; to exclude the class of Apothecaries from the practice of medicine; to establish permanent regulations for insuring a thorough medical education, — this alone conferring the right to become members of the new college; — all persons thus admitted, to be entitled to equal privileges.

Paris. M. Trousseau has been elected Professor of *Materia Medica* and Therapeutics, in the School of Medicine, in the place of the late Baron Alibert.

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